LANE MEDICAL LIBRARY STANFORD
1420 .H43 1925 OLD
Report of the Chicago Health education c
24503125121

REPORT OF THE

Chicago Health Education Conference

Called by the
American CHILD HEALTH *Association*

and held in Chicago at the invitation of

THE UNIVERSITY OF CHICAGO

June 22–26, 1925

Published by the
American CHILD HEALTH *Association*
370 SEVENTH AVENUE
NEW YORK

LANE
MEDICAL

LIBRARY
Gift
Dr.H.Gray

REPORT OF THE

Chicago Health Education Conference

Called by the
American CHILD HEALTH *Association*

and held in Chicago at the invitation of

THE UNIVERSITY OF CHICAGO

June 22–26, 1925

Published by the
American CHILD HEALTH *Association*
370 SEVENTH AVENUE
NEW YORK

LANE LIBRARY

Copyright, 1926, by
American Child Health Association

LANE LIBRARY

I420
H43
1925

PREFACE

HEALTH Education in the past has depended upon a grandly simple statement of a few profound child health verities. Such a program has been justified in the well-nigh universal conviction of these points held by children, parents and teachers.

But in the long stretch between our goal of healthy, happy children and the realization thereof, innumerable questions bristle, demanding answers. What exactly have we accomplished? If we have failed, why has it been so? If we have succeeded, what factors contributed to success? What exactly needs to be known, to be done, to make our goal more universal and certain of attainment? On the basis of such findings, how best can leaders be prepared to achieve the goal?

The great contribution of the Fourth Health Education Conference of the American Child Health Association held last June at the University of Chicago, is the detailed formulation of questions like the above, growing out of years of experience. They are the questions which are pressing upon the present workers. They indicate the basic foundation for constructive work in the teacher-training institutions.

It is as if, holding a magnificent vision, having fine plans and specifications, we had now reached the practical stage of gathering construction materials, out of which the vision will grow steadily into the reality.

83855

Concerning the Arrangement of the Report

This is the report of a working conference—a record of informal discussion, not a compilation of prepared papers.

The plan of procedure called for section meetings during the day with a plenary session each evening at which the substance of the day's work in each section, as prepared by a committee at the close of the group meeting, was reported by its chairman. These daily summaries were later unified to form a background for the recommendations passed by the Conference as a body.

To present these discussions and conclusions more conveniently for the reader, the editors have adopted a topical rather than chronological arrangement.

TABLE OF CONTENTS

	PAGE
OPENING SESSION	1
SECTION I—THE HEALTH PROGRAM IN SECONDARY SCHOOLS	14
SECTION II—TEACHER TRAINING FOR HEALTH EDUCATION	80
SECTION III—MATERIALS FOR HEALTH EDUCATION	242
CLOSING SESSION	324
RESOLUTIONS	339
SPECIAL MEETING ON HEALTH EDUCATION MEASUREMENTS	340
GUESTS OF THE CONFERENCE	343
INDEX	355

OPENING SESSION OF THE CONFERENCE

CHAIRMAN: *Dr. Thomas D. Wood, Professor of Physical Education and Advisor in Health Education, Teachers College, Columbia University, New York City*

Chairman:

I AM deeply appreciative of the honor and responsibility of being invited to act as the chairman of this meeting. Honors happen to persons and responsibilities pile themselves quite beyond the ability of individuals to carry them. But I would not attempt to bear the responsibility nor do I know how well I could do the honors without the cooperation not only of those who are officially connected with the organization of the meeting, but also of every member of the Conference.

The first speaker this afternoon, to give you a welcome, is the *Dean of the Faculty of the University of Chicago and the Vice-President of the University, Dean James H. Tufts.* I take great pleasure in presenting to you Dean Tufts.

Dean Tufts:

I do not know of any association that is more welcome to Chicago than the American Child Health Association, unless it would be an organization that would care for the health of members of the Faculty over sixty. But considering that that is more or less hopeless, that we either have not learned our lesson or else are such bad pupils that we can't be expected to learn anything new, we are very glad to welcome an organization that is looking after those for whom there is hope and who have a life before them.

We are doing many things at the University in one way or another, which contribute toward the general objective that you have in mind. This building, of course, is intended to provide food, rest, recreation and the building of strong bodies for a considerable group of young women who go through its walls

from year to year. I am sure these students make better teachers and housewives, mothers and social workers because of what they have gained here.

To begin at the bottom, we have a nursery school where children are weighed, measured and counted and, incidentally, taught some of the things that come from careful observation of their bodies and their minds. We have, of course, the kindergarten, the elementary school, and the high school, where we try to find out more about the growth of children, and try to give them such healthy outdoor sports or activities as will be conducive to their health. Furthermore, a good many of the teachers are especially interested in these problems and are studying them, working out statistics and making studies which we hope will be of use not merely to them but to others. As we go on still further we have the Departments of Hygiene, Bacteriology, Home Economics, and the other related departments of the quasi-medical group that are all working toward the same end.

We are very glad to see you, and we hope that you will find yourself at home in our various buildings, in so far as they may interest you. We hope that while you are here you will have a good time, and that the work that you do here will be beneficial for many, many years and many, many people.

Chairman:

I cannot conceive of a more favorable and inspiring environment that such a conference could have than is ours here at the University, particularly in this splendid, artistic building, this Ida Noyes Hall. We are appreciative of such hospitality and of Dean Tufts' welcome.

May I say one word very briefly, with reference to the historical background of this Conference today? This is, as some of you know, the fourth of the National Conferences on Health Education to be conducted under the auspices, first, of the Child Health Organization of America, and more recently under the leadership of the Health Education Division of the American Child Health Association.

A preliminary conference was held in the winter of 1920, in New York; the first annual conference at Lake Mohonk in

1922; the second in connection with the World Conference on Education in San Francisco in the summer of 1923; the third at Cambridge last summer. It is today significant that this series of conferences should mark in a practical and concrete way the service and contribution of a national welfare organization.

It is one of the distinctive functions of agencies and organizations outside of the schools, to lead in certain pioneer movements. We have numerous illustrations. This is simply one illustration of that type, and you have from the printed reports of previous conferences now available, a pretty clear statement of the differentiated, somewhat distinctive purposes and objectives. The movement apparently, in this historical development of the series, is from the more fundamental to the more specialized, from the general to the more particular.

The statement of the objectives of this Conference in relation to objectives of other conferences will be given to us by Miss Dolfinger, who is the active spirit and leader in the program and organization of this Conference.

Miss Emma Dolfinger, Director, Division of Health Education, American Child Health Association:

For the American Child Health Association, may I express to you what a very great pleasure indeed, it is to have you with us?

Our past conferences, as you know, have all been organized with the object of bringing together persons active in the field of health education, for general exchange of experiences and opinion. From now on, the need is perhaps different. Last year there was published a monumental work, the Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. Every one interested in health education surely owns that report and probably knows it more or less thoroughly from cover to cover. It gives us general principles.

We are all feeling around for the best way to realize in our special fields the general ideals which are set forth so excellently in this Joint Report. However, there is a feeling, I think, that we all need more facts in relation to the specific enterprises in

which we are interested. There is a need for studies, for research and for controlled experimentation. It is important that we should at least try specifically to define our many problems.

We hope at this Conference for constructive criticism of work which has been done. We also hope for constructive suggestions for the needed research and controlled experimentation. We hope for discussion leading to determination of what procedures are in accordance with sound educational principles. Briefly, health educators are now looking for some specific and direct guidance which will enable them to convert their generally held ideas of what they want done, into a well defined and vitally functioning part of the school curriculum.

Dr. Bobbitt will discuss for us some of the guiding principles, which we must bear in mind as we attack the problem of setting up the health education program. We hope during the rest of the Conference that these guiding principles will be held firmly in mind, and that the discussion will finally shape itself in relation to these guiding principles.

You will notice that every meeting closes with a question asking, in relation to the subject under discussion, what particular studies or what sorts of experimentation are needed in order to give us further fact basis, in relation to which we can plan this particular part of the health program more effectively.

If we can clarify our thinking to this extent as a result of our exchange of opinion, then we will have made an important step toward making concrete and specific the general platform which has been provided for us in the Joint Report.

Chairman:

It is certainly fundamental that we have, some time at the beginning of this Conference, a statement of general educational principles. Such a background, the teaching of many subjects in the school curriculum in the past has lacked, and for various reasons particularly the subjects that have come in more recently. It is therefore with peculiar appreciation of the great value of this next address that I announce the speaker. There is no person better qualified, no better authority to speak to us on this topic than Dr. Franklin Bobbitt of the University of Chicago.

Dr. Franklin C. Bobbitt, Professor of School Administration, University of Chicago:

In the beginning let us note that education is being redirected on all of its levels. The kindergarten is being reorganized and the process in progressive school systems has already gone very far. Elementary education is being reformulated, and the reorganization is certain to go much further than most persons have anticipated. For many years we have discussed the reorganization of secondary education, but as yet relatively little has been done. We have modified many of the superficial aspects of the high school but in the main the fundamentals remain unchanged.

We are coming to see that high school education is for the purpose of giving a certain specific type of human service. Its purpose is to improve the quality of human living. We used to think that secondary education was for the purpose of storing the mind with prepared packages of information, and that fifteen packages stored away without too much evaporation constituted one full-size secondary education. This, even in our more or less modern age, is still the prevailing thought. But recent developments show that this conception gradually but surely is being supplanted. More and more we are coming to see that education must be the wholesome upbringing of human beings, and that this upbringing is a process of normal living rather than a mere cold storage of subjects.

Health education in our high schools has been greatly neglected. In proportion to need, it must be looked upon as one of the undeveloped lines of training. The near future should see a large expansion of the health training program.

Health education neglected in high school

In the reorganization of secondary education, so as to make it better serve its purposes, the health training in the high schools is more favorably situated than some of the older departments. It does not have a large quantity of crystallized traditions and practices which must be swept away before we can formulate a modern rational program. Past neglect leaves a relatively free field for common sense and educational science.

In formulating a health program for the high school, the first step appears to be to take a general view over the whole problem of health education. Really we must view the entirety

of human education in which the health program is simply one of the ingredients. We ought to be able to assume that the general field as well as the health field has already been surveyed in its general outlines, so that we can with ease take this general over-view. But as a matter of fact, education is today upon more of a pioneer level than is generally realized. No one really knows with certainty what the outlines of education in general, or of health education in particular, should be. We lack the general principles needed for guidance.

All that we can do today is to present certain statements which may or may not be guiding principles. Some of them, probably, can ultimately be classified as principles, though at present they are but tentative and in need of further examination. They appear, however, to be in harmony with the recommendations of the program of the Joint Committee of the National Education Association and of the American Medical Association. A few of the statements are quite general and apply to all aspects of education, health training among the rest. The statements follow:

General education

1. General education is to promote the quality of human behavior. Nowadays in our curriculum-making the plan of approach is what we call activity-analysis. Let us discover what persons ought to do in managing their home life, their civic affairs, their health affairs, their vocation, their recreations, and the like, and we shall have discovered the objectives of education. The latter is simply to make one proficient in the performance of his activities.

2. The activities which constitute human living and which are the objectives of education take place at all ages and at all stages of existence. Education, therefore, is not merely to improve the quality of human living upon the adult level, but upon all levels from infancy to old age.

There is a certain shortsighted type of activity-analysis to be avoided. It says, since education is preparing one to do the things which adults do, therefore let us simply begin early to practice children to do the things which adults should do and in the ways in which they should do them. This loses sight of the differing nature of childhood and youth on the different age

levels, and of the consequent difference in the ever-changing activities from infancy to maturity.

We are coming, however, to discover that life is lived at all ages, that self-realization is effected at all ages. Every stage of existence is primarily for itself and only secondarily for later stages. In other words, no period in life is exclusively for the purpose of preparation for some later period. As we therefore set up the activities of high-grade physical living as the objectives of education we set up a long series of activities extending from the beginning of life to its close.

Central objective of health education

3. The central objective of health education is not a mind stored with knowledge; it is rather the process of living continuously and rather consistently in a physically wholesome manner. The objective is a process and not a static mental condition.

4. One learns to live wholesomely by living wholesomely. The central principle of health education as well as of all education seems to be the fine old dictum that one learns to do a thing by doing it. Thus the fundamental method of health education seems to be nothing more than simply practicing one's self in right physical living from day to day and from year to year.

Let us bear in mind that schooling may or may not educate. If it results in the practicing by children and youth of those wholesome activities which ought to make upright living then the schooling is educational. If, however, it consists of mere academic routine, the results of which mainly evaporate within a short time, and if it is thus a thing quite apart from human living, then in that degree schooling is not education.

At present, in the health field we are moving very decidedly in the direction of genuine health education. We are coming to see that health education results from right physical living, 168 hours each week, 52 weeks per year, and through all of the years from infancy to full maturity. In the health field, *one's life is one's curriculum.* Things outside one's life activities cannot affect character, habits or outlook. One's activities, however, whatever they may be, whether at school or away from school, are shaping habits, outlook and character. From this point of view, there is no such thing as extra-curricular activi-

ties. Whatever one does, wherever he may do it, is irrevocably moulding the man or the woman. The so-called extra-curricular activities are as influential in shaping individuals as those of the curriculum itself, in the usual sense of the term. The modern educator is discontinuing the use of the term extra-curricular, because there is no such thing.

5. Right physical living is not a general abstract thing but rather the performance of innumerable specifics. It is constituted of such matters as physical exercise, sleep, temperature regulation, guarding against invasion by micro-organisms, maintaining personal cleanliness, guarding against accident, care of teeth, eyes, nose and throat, and of other matters of similar character. For guidance in formulating a program, one's list of these specific activities should be as complete as practicable. This alone will ensure a proportioned program of activities for the succession of age levels.

Health activities are individual activities

6. The health activities are individual activities. In other words, one lives as an individual. One has his own native physical endowment, aptitudes, strengths, weaknesses and problems. One lives within an individual physical and social environment to which he must adjust himself. It is therefore necessary that those in charge of education should see that the children are guided in doing the things which they should be doing within their particular situations, and with their particular natures and needs. Health training is mainly a matter of taking in hand these current activities and guiding their performance. It is this, and not time and courses upon a program, which appears to constitute the major substance of health education. It demands a technique which we have heretofore not developed very fully in connection with secondary education. It is, however, being developed in connection with health education about as rapidly as in connection with anything else; probably even more so.

Our profession is sometimes alarmed by these tendencies which appear to be thoroughly revolutionary. Schools were born in the cloister, and they tend to remain cloistral. Until very recently we have not tried to develop a technique of education the substance of which was high-grade human living. It appears, however, to be nothing other than that which is dic-

tated by the simplest of common sense. It is not improbable that when education is reorganized in the ways which at present appear to be promised it will be very, very different from the perfunctory mechanical mass management of impersonal units, called pupils rather than human beings, which we now have. It will then be the process of growing human beings.

Self direction and self management

7. Health education should provide the conditions for the greatest possible amount of self-direction and self-management on the part of the pupils. One cannot have parent or teacher at his elbow all of the time telling him what to do. The older an individual, the more this self-direction is possible. The schools, therefore should employ a technique which will turn the responsibility over to the individual himself as fully as possible and as rapidly as possible.

8. Although parents delegate responsibility to the schools for supervising the pupils' activities for some 30 hours each week they do not delegate responsibility to the schools for supervising the children's activities for the other 138 hours each week. Parents are still responsible for directing the children's activities during this major portion of the time. There has been the conception that parents have abdicated their responsibility when they have thus turned their children over to the schools for its 30 hours, and that this is all that is needed. This is the easier way but it does not square with the facts relative to the responsibility. And so when we ask parents to cooperate, we are neither asking it as a favor nor are we presenting it as a privilege. We are merely reminding them of their responsibilities. If there is to be a proper school and home cooperation in the supervision of the pupils' health activities there must be a sense of responsibility on both sides.

9. The work of the school is finished so far as health education goes when an individual can himself consistently and continuously hold to wholesome methods of physical living. It is finished when he can fully exercise self-direction and maintain his physique upon a high level. It is not a matter of his having spent a prescribed amount of time or of having covered a prescribed number of academic units. It is all a matter of the way he is able to live when left to his own responsibility.

10. The power of self-guidance is a major objective of

health education. This is a principle which should be greatly emphasized, since teachers usually find it so much easier to guide the pupils' activities than to get them to guide them for themselves. And yet it is this latter result which is desired. The easier method keeps the pupil in a state of dependence, when a technique ought to be employed which would make him independent as expeditiously as practicable. It is clear that teachers try to teach too much. There is certainly too much teaching on the high school level and far too much on the college level, with an altogether insufficient amount of practice in independent self-direction. Naturally this latter should be supervised. But it will develop only through practice. The first law of habit formation is that one should practice an activity in the way in which it is later to be exercised. This applies as fully to the habit of independent self-direction as to anything else.

11. Self-direction requires the guidance of knowledge, information, vision. One must view and evaluate all of the factors involved in each health situation and problem before he can arrive at a vision as to the proper mode of action, and also before he has the requisite insight currently to guide the actual performance. This knowledge of how to act should very largely be gained through viewing the right activities of those individuals who have advanced farther along the road, and who exemplify the things that ought to be done. It should be by association through all of one's growing years with more mature individuals who are performing the health activities in the proper ways. He should see health science in its living operating form as it is exhibited in the lives of individuals round about him. To see it merely as an embalmed thing in textbooks is practically not to see it at all. So far as he sees it only in textbooks, it is wholly lacking in vitality.

Health science in living, operating form

The science must be got largely also from books. But even here the thing needed appears to be not simply a more or less mechanical memorization of cold storage information with the hope that it may at some time be of value. As we define science in terms of intellectual activity, we are coming to see that books are to be employed for the promotion of a normal type of this intellectual activity. Our profession is not quite certain yet what constitutes normal intellectual activity for children, youth,

and adults. We have, however, what is called the activity of vision, using the term in part figuratively to mean one's entire apprehension of reality. One gives some portion of all of his waking hours to this looking out upon the fields of reality. This is one of the fundamental portions of his normal living, intellectual though it be. Ordinarily it relates to the near and the superficial. For civilized living in almost any field nowadays, it needs to look to both the near and the far, the superficial and the fundamental. In other words, this more or less continuous viewing of reality should achieve that level of vision which we call science. Stated in terms of activity, science is simply a looking out upon and into the world of reality. It appears that intellectual education is simply to be a matter of taking this current and relatively continuous vision in hand and giving it width and depth. Our professional task is to find the different lines along which one's vision of reality should be made to grow, and then to make it grow. This needs to be more or less continuous, probably, and not a matter of relatively short and isolated courses.

Continuity of growth

These matters appear to relate to the problem of the mode of organizing and administering this necessary health science. In the physical realm, we know that growth must be continuous. We know that if we are to be successful in developing and maintaining health, our activities must be unbroken through all the years. We cannot take a semester of physical growth now and another semester of physical growth two or three years hence. And as we come to see that science is the activity of vision, and that the activity must be made to grow through continuous cultivation through many years, it becomes clear that it is not a matter of giving a semester course now and then. Our problem is so to organize the activities which make up the current vision of children and youth that the health portion of it shall be a more or less continuous ingredient.

This continuity of growth, and consequent need of continuity in the conditions of growth, is a matter which is mostly disregarded by our high schools. They have organized their entire program into packages of standardized size which they administer without any regard for continuity of experience. They appear to be relatively oblivious of the nature of human growth.

As a consequence it does not seem possible that the high school Science Department is prepared to conduct the science portion of the health training until it has fundamentally reformulated its purposes and processes. The Social Studies Department which should take care of a considerable portion of this health science, on its social level, is suffering from a similar incapacity.

The materials of health science are perhaps better organized into textbook form at present than those of any other field of public school science. And yet for our immediate purposes, probably the greatest need is that of abundant, diversified, and interesting reading materials. These readings should be for the conscious purpose of awakening and maintaining a vision of the innumerable things involved in the field of health, and to do it in a manner which awakens and holds the interest of the readers. Readings of this type now exist in considerable quantity. Our task is to find and assemble them. We need not in the beginning be too much concerned about system and sequence. The main thing needed is the experience. Sequences can be arranged afterwards.

Need of good health literature

Since your program covers also the training of teachers in the health field, let me mention briefly a few matters which are pertinent in the problem:

1. In the field of health training, the teacher is primarily not a teacher in the old sense of the term, but rather a supervisor of the processes of right physical living. A moderate amount of teaching is necessarily an integral portion of the process. But it is not the major thing.

2. As a director and supervisor of a high quality of conduct in the physical field, the teacher's first duty is to exhibit that high conduct in a clear, unconfused, consistent and unmistakable manner. As a matter of fact we must get our science quite largely in its living form through a process of human contagion. In the teacher's vision of matters related to health, in his valuations, in his interests, in his enthusiasms, he will provide an atmosphere necessary to awaken similar interests, valuations and enthusiasms on the part of his pupils.

3. The teacher's primary task in this field is not to administer certain courses which come at fixed times on a mechanical program. It is rather to surround the pupil with the

conditions, opportunities and influences which will result in right vision, right thinking, right evaluations and finally in a continuous or habitual right health behavior.

Health taught through human contagion

4. As a prospective teacher grows up through high school and teacher-training institution, he should through those years be continuously exercising successful self-direction in the care of his physique. By doing so, he learns what the road is, how it is to be traveled, and all of the dangers that are to be guarded against. Unless he has himself lived the life which he expects his pupils to live, he cannot have a proper sense of the realities which are involved. He cannot have the enthusiasm, nor can he provide the atmosphere of valuations which constitutes a major influence. And his science should have been got through the normal and continuous human activity of vision in the way expected of his pupils.

5. In the training of the teacher for his work, the main thing is not that he should have been taught, but that he should have lived.

Chairman:

I am sure I speak the sincere feeling and judgment of all of you when I say that we are genuinely grateful to Dr. Bobbitt for giving us this fine introductory statement of principles and background.

Section I

THE HEALTH PROGRAM IN SECONDARY SCHOOLS

Chairman: *Mr. A. S. Barr*
Associate Professor of Education
University of Wisconsin
Madison, Wisconsin

Secretary: *Miss Ethel Perrin*
Staff Associate, Division of Health Education
American Child Health Association
New York City

Topics:

1. The Personal Health of the Pupil.
2. What Is the Minimum Training for Healthy Living Which We Should Demand in Secondary Education?
3. What Departments Have Contributions to Make?
4. How Can We Coordinate all this Material from the Different Departments?
5. What Pupil Activities in School and out Contribute to Establishing Health Habits and Attitudes?
6. What Research Studies Are Needed to Determine Essential Health Content in Special Fields?

Summary.

Topic 1: THE PERSONAL HEALTH OF THE PUPIL

Chairman: Mr. A. S. Barr

Chairman:

I AM taking it for granted that you are acquainted with the report "Health Education—a Program for Public Schools and Teacher Training Institutions," prepared by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. This report forms the background, the starting point, for our discussions. We are here to interchange opinions, to work together. This is a working group, not a talking group, assembled to see if we cannot come to some better understanding.

Please bear in mind that one of the things we want to get out of this discussion is a program of scientific research and investigation to improve the situation with reference to the personal health of the pupils in the public schools. I will ask Dr. Walker of the American Child Health Association to open this discussion.

Dr. W. F. Walker, Staff Associate, Division of Research, American Child Health Association:

Survey of 86 Cities

As many of you know, the American Child Health Association made a survey in 1924 covering eighty-six cities with populations from forty to seventy thousand, to find out what was being done throughout the country in the field of child health. One division of this survey related to the health of the school child. The Association went to some extent into the subject of school medical service. Extreme variation was found in the methods of this service. On the one hand was the type in which the cases of individual pupils who, because of the obvious nature of some defect, had been forced upon the attention of the teacher or nurse with the result that the pupil had been brought to the attention of a city physician, or possibly a part-time physician employed by the board of education, or maybe a physician whose interest in school children prompted him to give attention

to these cases which presented a problem to the school nurse or teacher. At the other end of the scale was found a complete system of physical examinations of either cross sections of the school populations annually or an attempt to cover every child every year, coupled with a complete nursing follow-up.

School medical service

Under the first plan, if we may dignify it with that term, we may find at the beginning of the school year all children marching past a medical inspector at the rate of sixty to eighty an hour, because the law of the state says that every public school child must have a physical examination annually, without defining of what that examination shall consist. At the other end, and I do not consider it extreme, we find physicians spending from ten to fifteen minutes or more for an initial examination with periodic check-ups of those having defects, and re-examination of all children at definite intervals. The findings of these examinations are interpreted to the teacher, the nurse, the parents, and become to the nurse and the teacher in a sense a qualitative analysis of the material with which they have to work. There is almost a uniform gradation between these extremes, each city system depending for its position upon the interest in the community and whether or not there has been a leader who has given thought to the magnitude and importance of this subject. The tendency has been to increase the time for each examination and to some extent to decrease the frequency, substituting inspections by nurses and teachers for the services of a physician in certain types of work, principally vision and hearing.

While this is primarily a discussion of secondary school procedure, it seems to me to be indissolubly bound up with our elementary school program in this particular. If we are to take as our guide in this matter the plea for annual physical examinations for adults and to reason that if this is good for adults it is probably equally good for children, and there are many here who will take that attitude, it seems then fitting that we should give some consideration to the cost of such a service and whether or not it is a legitimate public charge.

From analyses of urban populations we find that about 35 per cent would not be in a position economically to afford an annual physical examination at the hands of their private

physician. For this group, if an annual examination is worth while, it could probably be done at public expense through the school service. If it established the habit of annual examination among a large proportion of the remaining 65 per cent which habit they would carry into adult life, we might justify the examination of these as a public charge under the heading of education for health.

Nearly every school system is looking for guidance in this matter. State laws which in some instances specify what shall be done are, however, in a state of flux and may be molded. It seems then highly desirable that this meeting should give some consideration to the economic limits of school medical service, in order that a united public opinion may be built up for this important service.

Chairman:

Dr. Walker has given us some very interesting facts as to how the personal health of the pupil is being handled.

Mr. August Maue, Superintendent of Schools, Will County, Joliet, Illinois:

Just this thought comes to me as we are discussing this matter, "Where does the responsibility of the parent end and where does the responsibility of the teacher begin?" I find we have plenty of parents who say, "Well, we will let that go until he goes to school and the school authorities will fix it up for us and it won't cost us anything," and in that way parents impose on the general public. The same thing happens in the high school where physical corrections are made through the public service. I do think as school teachers and schools we are assuming altogether too many responsibilities. I realize the great importance of health education among children, but certainly we need to educate the parents to their responsibility and the part they must do. I feel it is primarily their responsibility and not that of the schools.

Educating the parents

Dr. Walker:

Following up that thought, may I suggest that a complete system of health education for the children after a period of years does get to be a system of health education for the parents,

and you will find many of the defects corrected before the children enter school.

Chairman:

Dr. Wood, have you anything on this topic?

Dr. Thomas D. Wood, Professor of Physical Education, and Advisor in Health Education, Teachers College, Columbia University, New York City:

I wanted to say this one word in answer to Mr. Maue. If the school attempts to perform its proper function, as I see it in relation to public education, it will set the standards and discover the condition of the pupils physically, mentally and in personality and then it will put up to the home and the community the problem of taking care of the correction, the readjustment, the rehabilitation of the child.

I should like to speak in answer to the question that Dr. Walker raised, "How much can society assume in the way of expense in examining high school pupils?" I am perfectly sure that every high school pupil ought to have a thorough health examination each year. I believe that it is the business of the school, as a social agency and institution. I believe it is the business of other agencies to correct the physical defects that are discovered in the children outside of those simple orthopedic defects, nutritional defects and certain mental and emotional maladjustments, which the schools should be better able to help adjust than any other agency in the community. I see this whole program of the development of the health of these high school pupils under two headings, health service and health education.

Health service

Health service includes, in the first place, this examination of what the condition is, recommending to the parent, to the community, to the board of health, to the physician, what ought to be done for those who need to be reconstructed. It includes in the second place, surrounding the pupil in the school with a sanitary, healthful environment. In the third place, it involves the hygienic program of instruction and that integrates closely with mental hygiene and sanitation at various points. All the materials that are used in the education of the child should respond successfully to health tests. That is health service.

The child's health depends very definitely on his education in relation to his own health and the health of others. What should the high school do there? I think it ought to find out what are the health habits of the boys and girls coming into the high school. We must have a scale. We haven't it yet. Within a month I have had an almost unanimous expression from a group of thirty secondary school principals, supervisors and teachers. Their collective opinion runs this way: "Only 10 to 15 per cent of the boys and girls entering high school are performing 75 per cent of the health habits that they ought to be performing at that stage of growth and development." I take it that that is one of the fundamental things we ought to learn. It is a part of the health condition of the high school pupil. Now, that will give us a basis certainly, for being concerned about the program of health education, which means trying to help the pupils to better habits, better attitudes and more knowledge.

I can understand perfectly well the difficulty that a great many high schools are discovering in arranging a program of health education that seems satisfactory. The whole thing is so complex.

Chairman:

Dr. Monilaw who is *Director of Medical Service of the University High School, College of Education, University of Chicago,* was unable to be present today but has sent some material to be read.

The Development of the Personal Health of the Pupil

A Description of How This Is Being Handled at the University High and Elementary Schools of the University of Chicago

Elementary and High Schools, University of Chicago

1. *By pre-school inspection.* Before the first day of school annually all boys and girls are subjected to a short medical and physical examination. The purpose of this examination is:

   a. To prevent contagion getting into the school.
   b. To make a record of the illnesses of pupils occurring since the date of last attendance.
   c. To get a physical history of new pupils in attendance for the first time.
   d. To note any present or past illnesses which may affect the child in his relations to his work or his fellow students.

Special attention is given to loss of weight during the summer, to testing of sight and hearing, and to exposure to contagion. Results of this inspection are made in carbon copy, the original being placed in the student's medical file, the carbon copy being sent to the principal, with recommendations stated thereon. All results of positive nature that are sent to the principal are underscored in red, in which case the principal is expected to take some decisive steps. This saves the principal's time and makes action sure.

Annual examination and follow-up

2. *By complete and careful examination of every student during the week of that student's birthday.* This examination is exhaustive, consumes considerable time and in the case of small children is usually done with the mother or father present.

a. The results of this examination are carefully recorded and the report of the findings made to the principal in carbon copy as usual.

b. The principal in turn uses the information as follows:

(1) Notifies teachers to make allowances for deficient hearing or sight.

(2) Notifies physical training teachers to adjust seats and desks to meet the special need of the pupil.

(3) Notifies parents of all deficiencies and recommends their cooperation as well as the cooperation of the family physician or specialists.

(4) Notifies the physical training teacher of cases which require special guarding, such as heart lesions, and all cases which need special attention in a corrective way.

These reports thus going out of the principal's office place a very definite responsibility upon the physical education teacher, much more so than if the report went to the physical education teacher from the physician. The principal often calls parents in for consultation, after which he refers them to the physician for further facts.

3. *By follow-up examinations.*

a. To see that recommendations have been carried out.

b. To note progress.

c. To make records of treatments, operations and progress.

4. *Special instruction in health education.*

   a. Definite directions given by the examiner at the time of the examination to either parent or child or both on posture, diet, medical treatment, etc.

   b. No classes in hygiene or health education are offered in the school, yet the physical education teachers often give ten minute talks on such subjects as are listed below and these talks are generally given when the opportunity presents itself and when there seems to be a demand for the presentation of the subject. For instance, a discussion is often given on spitting. This talk may be occasioned because the physical director has seen a boy spitting on the floor. The talk is fitting and the boy is disciplined at the same time.

   Ten minute talks on health

   Topics:

   Prevention of colds
   Spreading of colds
   Spitting
   Dress for hot weather
   Dress for cold weather
   Bathing
   Sleeping
   Diet

   These talks are given in the middle of the gymnasium lesson when a rest of five minutes is beneficial and advantageous.

   c. In both the elementary and the high schools the room teachers further the work of the Department of Physical Education by presenting literature bearing upon health subjects and by asking children to write papers on the subject.

   d. Among the athletes it is quite customary once or twice a year to call a meeting of all the athletes in the school, which in the university and high school means 90 to 95 per cent of the boys. From one to two hours is usually given to this meeting at which time all phases of health as pertaining to athletic physical condition are discussed. In my personal opinion these occasions are of the utmost importance for the boy at this particular high school age. He is more interested in health for the sake of athletics than he is for health's sake. In other words, at this particular time in the life of a boy the fact that the boy is in line with athletics is taken advantage of and made thorough use of.

e. On one or two occasions a year the principal invites special speakers to talk on health subjects in assembly, boys and girls separated, and much is accomplished in this way.

In conclusion let me state that it has been my personal wish for a long time, and I am sure the wish of others, to install a course of health education extending through half or all of the school year and to make this course compulsory for every boy and girl in the school. We have not yet found the time ripe for the presentation of this course for two reasons: First, we have been unable to find a place for it in the school curriculum; second, we have never been able to reach a conclusion as to the content of the course.

I am extremely sorry that I cannot present these thoughts in person, yet I hope that the brief outline given above will be of some interest and assistance.

Chairman:

I shall call next upon Dr. Moore of Des Moines, Iowa, to tell us briefly of the methods used in the schools there.

Dr. Fred Moore, Director of Department of Health, Des Moines Public School, Des Moines, Iowa:

Des Moines, Iowa

Our situation in Des Moines is not fundamentally different from any other place. These problems are found everywhere and are only varied in some details by the local conditions. We have nothing to offer you from Des Moines in the way of particular accomplishment. I have been asked to tell something of our organization. Our Department of Health in the public schools was born of the necessity for the control of contagion and developed on the basis of acquired experience. We must first organize ourselves in order to organize our material. Therefore, correct organization is of fundamental importance. We have brought together into one department all those activities which are essentially related to the development of the health of the pupil. Those constitute the Health Department and when I say the Health Department, I use the word "health" in its broadest sense—not only physical well-being but a happy existence and physical well-being. We have organized our forces

in the Health Department into four bureaus, school nurses, physical education, dental hygiene and medical examiners.

Dental hygiene in lower grades

The bureau of dental hygiene with us no longer operates in connection with the junior and senior high school students except in rather extreme cases of relief, because we feel that theirs is a problem which if it is to accomplish anything, must be tackled in the lower grades. So that aside from mere inspection and emphasis to the children with reference to dental hygiene there is no active work carried forward in the upper grades.

Our bureaus of nurses, of physical education and medical examiners are organized for a correlated piece of work. The children are examined and classified according to their physical condition. We put as many as possible into the recreation group. We prefer the term "recreation group" rather than "normal." For that group we try to emphasize the activities in which they may be interested. It may be golf, or baseball or any form of wholesome physical activity in which we try to get them interested in order that it may become a fixed part of their life and carried over beyond their school period. The other groups are classified according to posture or their particular needs, by the physicians in conjunction with the teachers of physical education, and given appropriate work. Needless to say there are those special groups for whom we attempt nothing other than perhaps a slight amount of directed activity. I refer to particular individuals, those who need expert orthopedic advice and for whom such advice, coming through a school department, would be out of place. I might say in this connection, also, that all the way through we place the emphasis upon education and not upon relief. We engage in no relief work whatsoever except a small amount of dental work and the control of the ordinary parasitic skin diseases where there would be no opportunity to get it done otherwise.

The nutrition work in the junior and senior high schools is referred to our workers in physical education or to the nurses. Generally it is referred to the nurses. It varies somewhat with the organization of the particular school but there is always a close coordination between the nurse and the teacher of physical education. Our nurses teach courses in elementary home hy-

giene and we feel very strongly that those courses should be taught by nurses because of the background which they have.

That constitutes the organization of the department. I would emphasize the word "organization" as compared with the word coordination, meaning by organization those activities which are directly in the Health Department, and by coordination those activities which come in other departments but have a bearing upon health.

Miss M. Elizabeth Barker, Assistant Director of Health Education, Tulsa Public Schools, Tulsa, Oklahoma:

Unusual clinic in Tulsa schools

We have an unusual clinic, I think, for school children. There were last year, 596 operations performed in our clinic; 40 per cent of the children in one of the schools in one county received some remedial work through the operations of the clinic and through the dental operation office. This method of taking care of the remedial defects, I think, is unusual in that it is being done right in the school system.

Dr. G. Loutrell Timanus, Supervisor of Health Service, Playground Athletic League, Baltimore, Maryland:

What I have to offer is more or less my own experience with reference to the medical side of education in high schools and some elementary schools. I have had quite a number of experiences in one-room schools and high schools.

We feel that a medical examination, to be done carefully and correctly and with value, should be done by a man who is a specialist in medical inspection as a life work. We feel that the man who is just a part-time man and who has made medical examinations only a few times is not qualified, any more than a teacher is qualified to do special work if she has not made that a study. The same thing is true in nursing. We feel that the nurse who follows up these cases must have had special training in the following up of these school cases.

In making the examinations, we look for defects which require attention, such as heart conditions and lung conditions, defective vision, and so forth; but there are quite a number of special things which we have to handle as a group. For instance, goiter. In certain sections of Maryland we have as much

as 60 per cent of goiter among girls and 40 per cent among boys.

I think it important to make a special study of the different types of people. I had the good fortune of being present at a meeting of the American Association for the Advancement of Science, in Washington, and heard Dr. Graves speak on the scapula types of people. In that discussion he very definitely showed through slides and through his paper that there are three types, the concave, the convex, and what is called the straight. These terms apply to the shape of the scapula along its vertebral border having a certain conformity. That sounds rather ridiculous, but nevertheless, it is true. I have followed these observations since Christmas, and have examined probably fifteen hundred cases, and you can very definitely divide people into these types. That has a very definite bearing upon the future of the individual. You can probably take a hundred people, divide those people into these types, and you can see certain characteristics in one that are not seen in another. It is claimed that if you take ten thousand persons, say at the age of five or six, and examine them, you will find approximately 50 per cent with concave, 10 per cent with straight, and 40 per cent with convex scapula. Now at the age of eighty, if one thousand of those ten thousand individuals are yet alive, an examination of that thousand would show that 80 per cent of them are convex, and only 20 per cent concave and straight.

I just mention this because I feel that in all fields we are in great need of much experimental work.

Dr. J. Mace Andress, Lecturer on Health Education, Boston University and Boston School of Physical Education, Boston, Massachusetts:

I have just one other point, and that is in relation to physical defects. I should like to mention this, that a physical defect may have two effects. First of all, it may cripple the individual physically. For example, if he has bad teeth that may interfere with mastication of food. But there is another effect, and that is the mental. Now some of the maladjustments of life are due to that. We all know during the high school period the pupils take a very great interest in personal appearance. For

Dual effect of physical defects

example, take the high school pupil that is afflicted with pimples on the face. Some of us can think back to our childhood and remember our feelings in regard to that. We sometimes find pupils who suffer tremendously, so that it interferes with their work, simply because of this fact. In one case the high school student was failing in her work—it happened to be a girl, and girls are more sensitive—and it was only when advice was given and when she was told that this condition could all be cleared up that she began to get a new hold on life.

We must always remember that we are teaching individuals and at a time in life when they are exceedingly sensitive, and we should be alert to signs of mental breakdown and try to find the causes.

Mr. Harry A. Scott, Director of Physical Education for Men, University of Oregon, Eugene, Oregon:

I should like to make just one suggestion in connection with the medical examination, and that is that it be a periodic medical examination. Just one is not enough; they should occur at regular intervals.

Dr. John D. McCarthy, Instructor in Health Education, New York University; Specialist in Behavior Problems of Children, New York City High Schools:

New York

I suppose the answer to the question, "What information is needed?" is that we need all the information we can get. In order to get that information it seems to me that we should regard the child not from one angle or from one aspect alone but from the aspect of his total personality. One of the methods that is certainly best in getting information has been that of the health questionnaire. We devised the health questionnaire; there was nothing particularly novel about it. I suppose it was copied from other questionnaires which were inspected. This questionnaire was sent home by the boys, and the parents were requested to look it over and write out answers. One of the questions, for instance, was, "Does your son include in his diet such vegetables as spinach, carrots and turnips?" I am going to use those three as examples. The parents were to write "yes" or "no." Now, we had two objects. The primary object was not

to find out whether that particular boy included those three vegetables in his diet; the primary object was to educate the parents and, therefore, it seems to me that a department of health education ought to have an educational value for the parents and the other members of the families of these children who come to school. In other words, health education ought to extend into the home.

Health questionnaires

The second object of the questionnaire—there were twenty questions—was to find out what our boys needed most. We made a survey and found that 20 per cent of them came to school without any breakfast, then an additional 20 per cent came to school with what I regard as worse than no breakfast—coffee and a roll. We used the information that we obtained from the questionnaire to motivate the instruction of health education. That is, we learned there were certain needs and we built the instruction in health according to those needs. We spent a good deal of time, for instance, on the matter of breakfast, emphasized the fact that that was the foundation for the day's work. Then we made out and suggested menus giving proper choice or wide latitude of choice, so that a satisfactory breakfast would be arranged in every home.

One other thing that has worked out very well has been the matter of the daily inspection, the physical inspection. That can be done rapidly and yet at the same time it holds pupils up to a standard of performance, and certain things like the care of the skin and the care of the hair can be observed very quickly and records kept and credit given for improvement during the course. We lay a lot of stress on that matter of improvement and effort made for improvement. In New York there is no excuse for a youngster allowing a remedial defect to go uncorrected. We provide a pupil with a list of hospitals, we recommend certain ones, we have a list that includes the whole city also the boroughs of New York, so that all correctional work can be done if the youngster really wishes. We have plenty of clinics. There is a special fund for procuring glasses. If we recommend glasses, for instance, Dr. Mason, an oculist with an adequate training, examines the pupil first, and if he finds something questionable then he suggests that the boy go to one of the good clinics in the city, where they make a complete exami-

nation, treat the eyes and prescribe glasses. If the boy says, "I can't get glasses, I haven't the money," then we draw on a fund. There are plenty of free clinics and hospitals available.

We find the boys take a great deal of pride in having these matters corrected. During the year every boy is given a physical examination. That is done under the direction of the physicians. It is done to a large extent by the members of the physical training and hygiene departments. We get certain information there and we follow it up in the hygiene classes. Pupils cannot graduate from this school unless they have their defects corrected. They are responsible for that, that is emphasized more than the classroom instruction. We don't care if they get a hundred in their written examinations, but if they don't keep themselves in proper condition they don't get credit for the course and, of course, a great deal more stress is laid on healthy daily living than the mere matter of corrected defects. In many cases there may be no defects to be corrected.

One other thing is the matter of efficiency in motor activities. That is attended to by the physical department. Each term every boy has to meet a certain standard of physical efficiency. We have a certain number of stunts in the gymnasium and each boy is put through the stunts. He doesn't get credit for his work unless he is able to do it, unless he shows a certain amount of reserve power, running ability, jumping, etc. One thing I am going to emphasize particularly, because it is usually overlooked and because my interest is mainly here, is the matter of mental hygiene. I think it would be a great pity if this Conference came to an end without giving this subject the attention it deserves. Therefore, I am going to take every opportunity to harp on mental hygiene. I think we are inclined to think of the youngster in terms of tonsils, adenoids, teeth, hair and things of that sort. We ought to regard the human being as a total personality, an individual who is made up of physical parts but whose behavior, attitudes, emotions and methods of thinking are well worthy of study. If these become disorganized you can have ill health or disease just the same as you can on the physical side. Therefore, health is simply a matter of adjustment between the organism and its environments, between a child or an adult and his environment, and in that adjustment the

Mental hygiene

mental factors come into play just as truly and, perhaps, more so than the physical factors do.

I think we ought to give more attention to the study of personality than we do. We find so many people going out into life from the secondary schools, colleges and universities with excellent teeth, skin in proper condition and heart functioning all right, but they do not make a success. They do not adjust, they don't get along with people, they are not able to do their work. There is a defect of the personality and, therefore, I hope that everyone who has any interest in health education will, from now on, lay more stress on this aspect of the field.

There is a bulletin published by the Children's Bureau in Washington. It was prepared by Dr. Thom of Boston and is an excellent guide to this very subject. You will find in there a syllabus to be used in making personality studies. It isn't complete but it is highly suggestive and very useful. Dr. Thom in his habit clinic in Boston was one of the very first ones to call attention to the importance of mental hygiene with the preschool child. Now, what can we do in the secondary schools? How can we get information about the children? The high school age is the breaking age of the child. Adolescence is the rock on which so many children collapse. You have no idea unless you have been interested in this work how many breakdowns there are and how important it is to provide children with a proper adjustment at this time.

I should like to emphasize the great field which the visiting teacher has. It seems to me that the visiting teacher movement is one of the most important movements that has been introduced into education within recent years. A good visiting teacher, who has been properly trained in matters of health education, including mental hygiene, can be of the utmost assistance to school children. We don't know enough about the life of the children outside of the classrooms. Teachers expect them to come up to certain standards of performance in Latin, mathematics, and so on; if they don't they are said to be dumb-bells or bone heads or something of the sort. Now in many cases, I venture to say in eight out of ten instances, those children are not dumb-bells but there is something that is interfering with proper performance. They are not able to work to their utmost

Visiting teachers

efficiency because there is something that is blocking them. I think it is our business to find out what it is. It is frequently in the home. It may be in the school itself.

What can we do on the constructive side? What I want to do is emphasize the fact that at this age we ought to include a course in mental hygiene. We see it recommended time after time to the colleges and universities but it ought to be in the high schools. We ought to make boys and girls of this age familiar with the matter of adjustments, with the matter of rest and fatigue. You see a nervous tension and strain. With this knowledge some of these breakdowns can be prevented.

Topic 2: WHAT IS THE MINIMUM TRAINING FOR HEALTHY LIVING WHICH WE SHOULD DEMAND IN SECONDARY EDUCATION?

Chairman:

OUR next topic is the minimum essentials in training for healthy living in secondary education. I will ask Miss Cara L. Harris to open the discussion.

Miss Cara L. Harris, Director of Health Education, Rutherford County Child Health Demonstration, Murfreesboro, Tennessee:

To build a health program we must take the child himself and his health needs, around which we can plan to use the contributions from the various departments of the high school. For the safety of the child we should visualize him as the central part of the program so that we will be able to coordinate our teaching very clearly and not get too departmentalized in our consideration of what knowledge and instruction the child of this age should have.

Child as central part of program

I have tried to outline briefly a few suggestions as follows: First, it is essential that he should have a knowledge of the human body in order that he may be able to respect that piece of machinery which he is called upon to operate—his own body. If he does not have some knowledge of the functions of his body he will not be able to operate this piece of machinery intelligently.

In addition to having some information as to what constitutes the structure of the human body and how it is operated, he should have his own physical examination to enable him to understand how near the average he comes, whether or not he varies from the normal, and what variations can be corrected and brought up to standard. If there should happen to be any defects that cannot be corrected then he should be able to understand how to care for himself, when these weaknesses are to remain as a more or less permanent part of his body. He must know, first, the general principles of the care of the human body, and then he must know the care, specifically, of his own body. Only a physical examination by a competent person can reveal that particular condition.

After his own body and its immediate needs have been cared for, sufficient follow-up work should be done. It is not enough to leave the child with a knowledge of his body and the defects that need to be corrected.

Inasmuch as the child's surroundings can be controlled to some extent by the child himself, he should have definite information as to satisfactory conditions in regard to such things as the amount and adjustment of light, position of the body in relation to light when one is writing, ventilation of home and school, temperature, clean water, and all of the things that go to make up healthful surroundings. I have often seen a little girl sitting on the rug reading in a dark corner of the room, almost cut off from the light. That child goes to school, where they have the windows properly arranged, lives in a home with an enormous number of windows and plenty of electric lights; and yet that little girl frequently reads late in the afternoon with no lights turned on because she does not appreciate proper light for the protection of her eyes. Children must have instruction in what should constitute correct facilities, and in how to use those facilities. It is not enough to have windows in the correct position if the child does not have information and interest enough to know how to use the light to protect his eyes. He should understand whatever municipal facilities or community facilities are provided for health protection and health promotion. Interest and knowledge are both essential. In the high school we give to our boys and girls education in citizenship—

Instruction in correct health facilities and their use

the only education in citizenship which in most cases they receive—to fit them to be members of boards of education, rural school teachers, and to hold other positions of responsibility in the community. Our high school is the place where we must give essential knowledge in regard to public facilities that are provided for health protection and health promotion.

The pupils must understand and appreciate the necessity of specific immunity against certain communicable diseases, such as smallpox, diphtheria and typhoid fever. That is absolutely essential for self-protection and also for a proper attitude toward the furtherance of these particular measures in the community.

To come back to the individual and his activities there must be education in healthful habits of living, and this should include sufficient knowledge of nutrition to enable him to select meals for the day; enough knowledge of physical activity and rest to understand an intelligent use of his time during the day, so far as activity and rest and sleep are concerned, and all of the other health habits that need to be stressed. He should have some knowledge in regard to his own mental make-up. During the high school period, that restless age when boys and girls are uncertain about all of the things around them, it is very important for an individual to get some idea of his own mental make-up. He will begin to see himself in the light of a person who needs to modify his particular individual characteristics in such a way that he will be able to fit into his own social group.

Mental and social health habits

The last point that I shall mention in the minimum essentials for instruction for boys and girls of high school age will be sex hygiene. I do not dare go further than this general statement, that sufficient information to protect the individual is absolutely essential. That, of course, would have to be adapted to the particular group. It may be that all through the grades and earlier years of high school a certain amount of foundation has been laid for rather more advanced instruction, but each individual situation would have to be determined upon its own merits.

To summarize, these are the points I make as minimum essentials in training for healthy living in secondary schools: First, knowledge on the part of the pupil of his own body;

second, physical examination and satisfactory follow-up work; third, principles of sanitary surroundings and ability to operate these facilities; fourth, municipal and community facilities for health protection; fifth, specific immunities; sixth, healthful habits of living; seventh, some knowledge, on the part of the pupil of his own mental make-up; and eighth, sex education.

Dr. Emma A. Winslow, Secretary, Child Health Demonstration Committee, Commonwealth Fund, New York City:

It seems to me that Miss Harris has covered admirably the essential points which should be included in a program for health instruction in secondary schools. In my tentative outline I have made four main divisions as follows:

Four main divisions in health instruction

I believe that each child in a secondary school should at some time receive detailed instruction on methods of health care and supervision, including special attention to the importance of periodic health examinations. I believe that each child should be instructed as to the essentials in a community health program and the importance of the greater development of community and individual responsibility for public health. In order that each child should have necessary information as the basis for intelligent health care, there should be thorough instruction in the secondary schools in biology and other subjects closely related to health work. Fourthly, every opportunity should be given for the establishment of the best possible health habits by the children as an important part of their health instruction, both by attention to health essentials during the hours spent in school and by the development of a feeling of personal responsibility for following health rules in the hours spent outside of school.

Mr. Delbert Oberteuffer, Instructor in Health Education, University of Oregon, Eugene, Oregon:

A point that I wish to mention is that there should be, somewhere, it seems to me, given by someone, an appreciation of the value of health. I mean by that that students, generally older students, find it very difficult to follow out some of the practices concerning health unless they see a definite reason for them,

and if we give them some reason why they should be healthy, why they should do this and that, it would help out quite a bit.

Chairman:

Dr. Schweitzer will you give us your points?

Dr. Ada E. Schweitzer, Director, Child Hygiene, Indiana Health Board, Indianapolis, Indiana:

I don't believe I have anything really different, but I thought I might have just a little different angle.

We believe in physical examinations, not only as a basis for comparison of standards, but as an incentive to the child for more efficient living. He should have a personal interest in improvement. Then he should have a knowledge of environmental factors that will contribute to health, to efficient living, and to happiness. We consider that the happiness is part of his mental hygiene.

He should have a knowledge of protection against diseases, and dangers that he is likely to encounter other than diseases. This will include, also, the forming of correct habits, which might, if not corrected, contribute to disease.

Then we have inspiration and practice in the formation of habits that are conducive to health; and the instruction and preparation for parenthood. I think that is a little broader than the subject of sex hygiene. It would include parents' responsibilities, the family as a unit in society, and sex hygiene as contributory to that.

Instruction for parenthood

Chairman:

Dr. Moore, let us hear your points.

Dr. Moore:

I have mine under four different headings. First, anatomy and physiology, enough simply to satisfy the student's individual curiosity in regard to himself and give him a basis for some of the things to follow.

The second is health habits. Under that, I should emphasize as number one, regularity; number two, nutrition and sleep;

number three, regular physical examinations; number four, recreation; number five, exercise.

In section three I have hygiene and sanitation; one, personal; two, home; three, school or other public buildings, gathering places in which he may be interested; four, community, under which would come the specific immunization.

Section four is physical education.

Chairman:

Miss George, may we hear what you have to offer?

Miss Grace George, Assistant Professor of Hygiene, Central Missouri State Teachers College, Warrensburg, Missouri:

I have thought especially of child welfare. That probably would include what has been mentioned about parenthood; but I think sometimes, when we put in a course on parenthood, we find that a little bit more significant than the high school student wants. They want just so much. I believe that if child welfare is insisted upon we can get the student interested in someone who is not in his social class; and I believe that if we had club work where the high school student would feel responsible for someone who has not had the social privilege that he has had, that would encourage self-respect in the pupil, or at least encourage a self-respect in the one who is not so fortunate. That I consider as a sociological question.

Missouri State Teachers College

Chairman:

Mr. Maue, have you something to offer?

Mr. Maue:

I have several topics. Here are some of them: First, knowledge of the body and its functions; second, nutrition and care; third, defects and their cure or care; fourth, hygiene and growth, and that would include the sex hygiene and all the relations between parent and child; fifth, surroundings needed for maximum efficiency; sixth, immunization; seventh, mental life. In connection with the seventh I should like to emphasize what seems to me important, and that is, that every individual has

within his power the shaping of his mental life, just the same as he has the power to shape his physical being.

Chairman:

Miss Brandl, please give us your points.

Miss Alice Brandl, Principal, Junior High School, Salzburg, Austria:

I put mine down under six headings: First, physical examination; second, a course in personal and community hygiene, which should be definitely tied up with the findings of the physical examination, and under that I would include any kind of direct health instruction; third, a course in biology, taught by the same person who teaches the hygiene course; fourth, the physical education course; fifth, a lunch room which is planned to give practical information in nutrition; sixth, a student health committee to assume the responsibility for school health matters.

Student health committee

Chairman:

Dr. Snow, may we hear from you?

Dr. Glenadine Snow, Director of Health Education, Michigan State Normal School, Ypsilanti, Michigan:

I have five topics and many subheads. I have first, physical examination, which would be a health examination, and the students would be given instruction at the time they have their examination. Second, follow-up work, not only for the correction of defects, but also for the formation of health habits. Third, I would give the students a knowledge of their bodies, a knowledge of biological laws, the place of the child in the universe, a knowledge of the laws that govern the plant and animal life, and that govern the student's own life, because I feel that children of that age are naturally introspective and rather egotistical. The next would be their place in the community and responsibility for the health of the community; and fifth, mental health.

Chairman:

Miss Short?

Miss Beatrice Short, Supervisor of School Nurses, Des Moines, Iowa:

Dr. Moore has covered most of my points. There is one thing that he did not speak of and that is, I think all girls should have a knowledge of simple nursing procedures such as are included in a simple course in home nursing; the course might be called home hygiene. I believe boys should have the same information; I think such a course is offered in only a few systems. Boys are seldom given any course in the principles underlying nutrition though such a course is usually arranged for as a required subject for girls.

Dr. Andress:

I am interested in the question of nutrition for boys, and wondering how boys in high school can get some ideas in this field. Would it not be possible in some cases to have some kind of a course in camping, in which we could get a number of different things, and among those things camp cooking? I don't know just how that would work, but I should like to know if there is anybody in this room who has tried this out in any way. I believe there is a practical aspect of this that boys ought to know about.

Miss Belva L. Swalwell, Assistant Professor of Hygiene and Sanitation, Iowa State Teachers College, Cedar Falls, Iowa:

I was going to say that in a school at Cedar Falls, Iowa, they have a cooking course—I think it is for ninth grade boys. The teachers asked the boys if they wanted camp cooking, and they said, "No, we get that with the Scouts. We don't want that. We want regular cooking, so if mother is sick we can get breakfast." Those boys are learning just the same as the girls, and it is really working out very successfully.

Cooking courses for boys

Miss Emeline S. Whitcomb, Specialist in Home Economics, United States Bureau of Education, Washington, D.C.:

I should like to say that in the Manual Arts High School of Los Angeles there is a very excellent course given to boys for one semester. It is called home economics, and they have just

one day each week in the laboratory. That was the understanding, that they were not going to cook all the time. They study nutrition problems. They also study child care and welfare and are very much interested.

When this class was started there were eight boys, but it was doubled and tripled, and I don't know how many are in the course now, but there are a great many.

Miss Helen O. Carlson, Director of Physical Education, Central High School, Tulsa, Oklahoma:

Home nursing and management for boys as well as girls

It might be of interest to you to know that the junior girls in a high school in Tulsa, Oklahoma, have a course in home nursing and home management. Next year, the boys will be included in the course. There will be a separate teacher dealing with the boys, and their course will be a little bit different. The Chamber of Commerce is backing the project.

Miss Marjorie Bouvé, Director, The Bouvé School, Boston, Massachusetts:

I have nothing new to add except that I feel that the health appreciation course should not be limited to the students. I think the whole teaching staff should be brought into that. At first you should create a faculty attitude of health appreciation.

Miss Carlson:

Somebody said something about the biology teacher teaching most of the hygiene. Hygiene could be taught in the Biology Department or the Science Department, but I feel that if each of the teachers who has the girls in her own gymnasium classes teaches the hygiene, she gets to know the girls, not only on the gymnasium floor but in the hygiene class, too, and these teachers can work the two together so much better than any person in the Science Department. I tried to work that out, because I felt that they had a closer contact.

Miss Swalwell:

One thing I think has been left out, and that is Safety First. There are quite a number of facts that children ought to be

taught in regard to Safety First, for instance, not to stand in the bath tub and turn on the electric light. Then I would go a little farther, I think, in the high school, so that the students will get a broader view of the health work. I would go a little farther in regard to community hygiene, the health of their state, their county, or town in which they live—what is being done for their health. I would give the pupils some information regarding international health laws but not so much of the international as national, county and state. That should be included in their work because they themselves are soon going to vote and will have to know about some of these problems,—what to do in regard to the sewerage system, or whether they want extension work, and topics of that kind.

Chairman:

What are your suggestions, Miss Henderson?

Miss Gertrude Henderson, Publication Secretary, American Social Hygiene Association, New York City:

I should like to bring out four points. First, a knowledge of the reasons underlying insistence on the health habits regarded as good. I think the person who has an understanding of what happens when he is choosing the right sort of food and when he is having the right sort of sleep, is more apt to be interested and to follow out health habits. I think a knowledge of physiological facts is apt to supply the motives that will do away with wrong reactions to given situations.

My second point is, a consciousness that every individual is a link in the chain of life—that is, some understanding, as far advanced as the age of the high school student permits, of the biological process of reproduction.

Third, a consciousness of the individual, as a part of society, family, school group, neighborhood, community, town, nation, world—a getting away from raw individualism. A growing child should have a consciousness of himself as a part of society.

Standards for choosing personal enjoyments

Fourth, an ambitious and varied interest in life; an awareness of the many opportunities for personal enjoyment; some standards for choosing among those enjoyments, for differentiating.

Topic 3: WHAT DEPARTMENTS HAVE CONTRIBUTIONS TO MAKE?

Chairman:

WE have now reached the point where it would be well to discuss these essentials in terms of different departments. I will ask Miss Katharine Pritchett to tell us what essentials she considers should be contributed by the various departments, particularly the Department of Home Economics.

Miss Katharine A. Pritchett, Consultant, Administrative Nutrition, Department of Welfare, Commonwealth of Pennsylvania, Harrisburg, Pennsylvania:

Attempting to determine which subjects in the high school curriculum contribute to health education is much like deciding which of the activities of life affect health.

Every act of life registers its impression upon health, favorably or unfavorably. Each subject in the high school curriculum contributes to health education. Some subjects serve as a medium of expression; others lend themselves to correlation; while others—the sciences—are the sources of health information.

Sciences contributing to health education

The high school science courses which make the maximum contribution to health education are the following:

Biology and Nature Study. To many students these become fascinating approaches; by applying the principles of animal and plant life to human life the pupil acquires a knowledge of health.

General Sciences. These are a fund of health information providing the instruction is applicable to the environment in which the pupil lives.

Chemistry. This is a splendid store house of health facts, and for many pupils an acceptable medium for health instruction. However, here again classroom instruction fails to function when it cannot be applied to the pupil's daily activities.

Social Sciences. Especially through history, community civics, and problems of democracy, those factors may be presented which stand for the betterment of home and local community.

Agriculture. The subject-matter of this science offers repeated opportunities for health teaching, while the outdoor life connected with it puts that teaching into practice.

Home Economics. For the girl home economics has much to offer: sanitation, personal hygiene, home nursing, psychology of color, hygiene of clothing, economics, food preparation, nutrition, and, more important than any of these, the creating of a home atmosphere which promotes health.

Physical Education. When scientifically taught, and when it trains in the healthful use of both mental and physical leisure time, physical education contributes directly to the health of the entire community.

The languages are the medium for transmitting health instruction. However, caution is necessary that the treasured classic literature shall not be perverted into health jingles and other crudities. Health education should build up its own medium of expression.

Health instruction can be correlated with all the other subjects in the curriculum, but the following present unusual possibilities: art, music, geography, dramatics and arithmetic. However, even these must recognize health teaching as of secondary importance.

Of the extra-curricular activities, school health clubs and the Girl Scouts and Boy Scouts have given the greatest impetus to health practices.

Notwithstanding all the health instruction that may be given through other than health courses, dependence on these alone would be most unfortunate. Such health training, at its best, would be only disconnected and incomplete. We must look forward hopefully to the time when a Health Education Department will be found in every high school.

Health education departments in high school

Miss Whitcomb:

Dr. Sherman said in a nutrition article in the February number of the Red Cross Courier, that of all the health factors the most important is food; so I shall discuss the nutritional phase first of all. We know that home economics really has nutrition in charge. Whether it is of the very best type or not, we do not say. We do not claim its perfection. But nevertheless,

the nutrition in the public schools, private schools, several hotels, the feeding of large numbers of persons everywhere, is supervised by women trained in home economics. We have a great many women in business now. The Eastman Kodak Company is one of the outstanding commercial interests where a home economics woman, a trained woman, is helping in the health education division. When we consider the home economics women in the extension field, the state people as well as the federal people, the nutrition work that is being done in the rural communities, in the urban communities, and all throughout the United States, is certainly supervised by the home economics women. The organizations for the betterment of the more unfortunate people, the poor people, have nutrition specialists.

Now that is just one phase of home economics, the nutrition field. A number of years ago we saw that in order to round out the girls in every phase of education pertaining to the home, it would be necessary for them to know something about the care of children, child life. Some of that work began in the Iowa State University, as you all know, where we have a number of home economics women contributing to this program. The outstanding school that is leading in this particular phase of education in this country is the Merrill-Palmer School. Now, I believe I am quite safe in saying that almost all of the outstanding state universities, and many of the other colleges and universities, are developing this phase of education. Before the Merrill-Palmer School we had the practice house or practice cottage in connection with the Home Economics Department of the University of Minnesota, and many of the other institutions have followed this plan. Here in the practice house the girls, training for the teaching of home economics, had the opportunity to study the life of a child. They had actual practice with children and the children have thrived.

Nursery schools and practice houses

At Highland Park, Michigan, there is a nursery school in connection with the Home Economics Department of the high school, and I am told that next year even the ninth grade girls will have some work there.

In Los Angeles the nursery schools, I think there are ten of

them now, are under the supervision of the Home Economics Department. This is the only city in the United States where the nursery schools are really supported by the Department of Education, or by the city under the Department of Education, and supervised by home economics people. It is extremely interesting. The home economics girls in the seventh and eighth grades have experience in taking care of the children, looking after their clothing, their food and rest.

In connection with Los Angeles I wish to speak of one particular school I visited. The school contains Mexicans, Japanese, Chinese, and I could not say just how many other nationalities are there. The food for the children was prepared by seventh grade girls, who were immaculately dressed. The girls happened to be Chinese and Japanese and Mexicans. The children stood in line and washed their hands, then got back into line and their hands were examined. The large lunch room was very pleasant with a fireplace at one end and flower boxes in the windows. These children from the youngest up through the eighth grade, sat around the table, conversed with one another, and ate in the proper way the food they should have. It was really one of the most delightful experiences I have ever had. I sat there with them with the supervisor of home economics and enjoyed it.

That is the type of thing we are trying to get in all sorts of schools. Even where the lunch room is in the basement the home economics woman makes it attractive, cleans it up, and serves as good food as she can.

Chairman:

Contribution of home economics

If we think of home economics in this very broad way, the contribution that home economics has to make even to the family relationship, I want to say the whole family, the whole health of the family, is really rounded out in a home economics course, and all angles, I think, are touched.

Miss Whitcomb has talked to us in rather glowing terms of the contribution from home economics. A number of departments have contributions to make. What has the Department of Physical Education to contribute to the program of health instruction?

Mr. Scott:

In the past, physical education has failed to live up to its possibilities in the contributions it has made to the health education program. In the matter of training students how to keep physically fit, we must begin in the grades and teach them activities which not only lay the foundations for a vigorous constitution, but which will also equip them with a lifelong means of obtaining pleasurable exercise. Physical activity, if it is going to function as it should in the life of the individual, must be a continual process. It must be pursued at regular intervals as long as the individual is capable of doing so, and unless the means is provided by the school program of physical education, the ability and desire to obtain regular physical exercise are likely never to be acquired.

Physical education

Through the physical education activity program we have a means of teaching many vital health practices. At the same time there is a like possibility of teaching negative health habits. Students, irrespective of grade in school, are not so illogical as to fail to observe the wide discrepancy between classroom instruction in hygiene, and actual practices on the athletic field, and in the gymnasium. We are all familiar with the water bucket and sponge which are fixtures on almost every athletic field. The besmeared features of the athlete are washed with the sponge, and then he proceeds to drink through it, after which it is replaced for the use of the next man. Many traditions of negative health value have grown up around athletic practices. In athletics circles it is usually considered "bad luck" if the individual should change, or have washed, his uniform throughout his athletic career. It is not a novelty to find a man who has worn the same uniform without renovation for four years, provided it has not decayed before that time. With the proper emphasis, players would follow as diligently a tradition which dictates that it is "bad luck" to wear a soiled uniform.

In order to insure the teaching of positive health habits, it is imperative that the physical education administration control the environment of the gymnasium, locker room, swimming pool, and athletic field; and that it take care of the issuing and supervision of gymnasium and athletic costumes. The health education opportunities which exist in and about the physical

education plant must be pointed out and made matters of daily practice if they are going to function in the lives of the students.

Chairman:

Miss Rockwell have you anything to add at this point?

Miss Ethel Rockwell, Supervisor of Physical Education, Kalamazoo Public Schools, Kalamazoo, Michigan:

In Kalamazoo the Physical Education Department is really held responsible for health teaching. We have felt that it is too big a thing for us to handle alone and we have made a great effort to get other people to help, and by making a study find out what the various departments are doing. I was very much surprised to find what various departments are doing and I think the Science Department is doing certain things we can't possibly do. We tried to teach nutrition, but the Home Economics Department knows so much more about it than we do, they have been trained so much better than we have for it, that they can deal with certain phases of the work in a way we cannot.

Kalamazoo, Michigan

In the physical education classes in the junior high school and senior high school we do attempt to give to the boys and girls certain definite phases of health work. We emphasize school community phases of health. The personal health is emphasized more in the lower grades and at the present time that is the responsibility of the Physical Education Department but we want more help from other departments because we feel we must have everybody back of our movement.

Chairman:

I am going to ask Dr. Timanus to continue the discussion of physical education.

Dr. Timanus:

In summarizing the contribution of physical education to a health program I have to offer a list of about eight points:

1. In the first place, with the physical education you would naturally have medical inspection to determine the fitness of the individual for athletics, and under that a group of health talks by the individual making the examination.

2. Under two there is the training of the individual—that is, they themselves take part in their own games and activities, which brings about muscle development, and stimulates nerve and reflex action.

3. Under three I have the proper diet. These children are taught in school the use of proper foods. We try to encourage group athletics, not individual athletics. We have all kinds of games for all age children.

4. You encourage them to take the proper amount of sleep.

5. Then there is the correction of vices, such as smoking, drinking, and probably the use of candy, if you consider these vices.

6. Next you have the attitudes, the proper thinking as a group.

7. There are also the social values, in that they meet new people and are subjected to different circumstances and surroundings.

8. There is a certain amount of emotional control brought into play. If you win you have the joy of victory, and if you lose, the chagrin of defeat.

Mr. Scott:

It seems to me that about everything has been covered, with the exception probably that a little more attention should be paid to medical selection of athletics, in competitive athletics particularly,—not in group athletics so much where strict medical supervision is exercised over all participants.

We hear on the right and left of us all about how much harm is done to growing boys through strenuous physical activities. Personally, I do not know whether that is so or not. From my observations—I am connected with the university and we examine hundreds of boys every year—I don't think that we can say definitely that we noted any injuries to heart or physique due to athletic strain. This is my observation of four years. We find that in our restricted exercise group about fifty-seven out of every hundred are heart cases. Now, my observation is that those boys who came in as heart cases were not the ones who took part in vigorous athletic competition; without having made an extensive study of the thing, I rather doubt if in that particular locality in the northwest there is much overstrain due to athletics. The condition exists, nevertheless, and I think it should be checked up very, very closely through medical examination.

Restricted exercise groups

Also, I think that there is a little more to be done in the

way of inculcating habits of personal cleanliness than most people do in physical health programs. It does not do any good, as we all know, to teach a thing and not use it. So it seems to me the way to teach nutrition is in the school lunch and at home, and if we are going to teach physical health, the way we can get it across is to teach physical health that is useful.

If we are going to demand cooperation of the other members of the faculty in putting across a health program, we must get that cooperation through human means. I want group equality. The only way we can get along, it seems to me, is through some promotion of activities for the faculty as well as for the student. I cannot see any reason why the high school teachers should not use the facilities of the gymnasium and the swimming pool as a group, just the same as the students.

Faculty use of gymnasium and swimming pool

I found in university work that almost every man on the university faculty is against physical education, every one of them, and with good reasons, I will admit. The thing that I found most effective was the organization of programs for the faculty members to get them together, and in one particular situation I know of an increase of about 67 per cent or 75 per cent of the faculty actually taking part in physical activities, playing with each other, understanding the problems of the Physical Education Department. Thus, it is much easier to get things across in the faculty concerning health and physical education than it would be in any other way, where the faculty is divided. So you have got to get some common ground and get them to work together.

It seems to me that those things naturally fall in the hands of the Physical Education Department, because we have a subject that has a common appeal; we have something that is interesting to everyone, because activity is interesting. Therefore, we have a common appeal. Make use of it, and we can get all the cooperation and coordination, and all the other things that we are trying to get.

Topic 4: HOW CAN WE COORDINATE ALL THIS MATERIAL FROM THE DIFFERENT DEPARTMENTS?

Chairman:

I HAVE not had a great deal of recent experience in health education but I have had considerable experience in getting departments correlated—general team correlation. It has always been a problem to me to know how to get effective correlation. I have seen a lot of paper correlations; I have tried a lot of paper correlation. I want to say that I think this problem is a very difficult one—this problem of getting real correlation, or coordination, if you wish to call it that.

Difficulties of departmental correlation

Let me state one of the problems concerning the coordination of the several departments that have contributions to make to health education. You realize that the training in these several departments is quite different; your school nurse comes through with one training, your domestic science teacher comes through with another, and your physical education teacher comes through with still another. I have had complaints from teachers and parents that pupils are not always getting the same brand of health instruction in all of these classes. One department will tell the student to do this, and he goes over into another department and is told to do the opposite thing. What should we do in cases of conflict in the several departments? How are we going to bring these departments together again?

How can the work of the various departments be coordinated? I shall first call upon Miss Rockwell of Kalamazoo.

Miss Rockwell:

I will tell of some of the things we have been trying to do in Kalamazoo along the line of coordination of health education in the high school. First of all, we had to arouse the interest of several people, including heads of departments, advisors and classroom teachers. The principal had a good deal of interest in health matters, and assisted greatly in the study of our facilities and needs. We are fortunate in having some organizing agencies that help a great deal.

In trying to find out just what work was being done along health lines we had various conferences with heads of departments and advisors. We asked each teacher in high school to write a brief statement of any health work which was being done.

The replies came in various forms. Some simply said, "Nothing being done"; others told of a few rather general things; some seemed disturbed because they were not doing more, and expressed willingness to do anything they could. We summarized the replies and found that every department in the high school really does contribute something. Physical education contributes a good deal. The Science Department offers much through chemistry, physics, biology and botany. The Language Department suggests several things they are doing, such as trying to secure good posture, arranging students' programs so that the students can get enough sleep, etc. The Social Science Department offers some valuable things through current problems, citizenship and other courses. The Commercial Department has several valuable suggestions, such as good sitting posture, proper lighting for work and suitably adjusted chairs. The Art and Music Departments do some very good things. Safety First and First Aid are taught by the Manual Training Department, and the Household Arts Department contributes a great deal along the line of nutrition and suitable clothing.

After we had summarized the contributions of instruction, we began to look around to find other agencies which were contributing to emotional and social health.

Student advisory system

The student advisory system is an important factor. We have nine home rooms, each with an advisor whose duty it is to help students in arranging academic programs, and also in adjusting social and other student needs.

We found about twenty-five clubs of various types that contribute to emotional and social health. Each club is organized under a faculty advisor who attends each meeting of the club. Each club advisor hands to the assistant principal, each semester, a statement of club aims, and reports upon club accomplishments. Various musical organizations also contribute to emotional health.

The student council is one of the strong organizations contributing to social and emotional health. It has charge of many of the disciplinary parts of the school organization, takes much responsibility in auditorium programs, and makes many fine suggestions regarding the welfare and policies of the school.

We made some surveys among the students to find what agencies are functioning and what the students are doing. We have quite a large group of girls who are physically not normal and we wished to find out what they do outside of school. We found them engaged in a great number of activities, such as Sunday School classes, church work and various clubs which have nothing to do with school. It is safe to assume that most of the student body is similarly engaged in many outside activities.

We made some surveys among students to discover their interests and opinions regarding various school policies and activities.

Student Board of Health

We started a student board of health which has functioned in a small way and which we hope will function more next year. The board of health includes one health officer from each home room whose duty it is to take charge of health activities there. This year the board of health assisted in interesting students in vaccination, after we had had a rather serious time because of a smallpox epidemic. The board also helped conduct a campaign against colds.

What we have done so far, is to try to find out where we stand. The next thing we hope to do, is to have a committee composed of heads of some of the departments, advisors and other faculty members, to study further our facilities and needs. We shall carry on more surveys among students. We hope to formulate a health course of study which will include the health education desirable for high school students. We shall base this course upon surveys of health needs of pupils and upon curricular possibilities of meeting the needs. We hope to have the responsibility of administering health education assumed by the various departments best fitted to handle each part. No doubt this will take several years to accomplish, and it may lead to the appointment of a person specially trained to direct the health work.

Chairman:

I look at health service from the standpoint of an administrator and these are some of the problems I have come upon in this main problem of coordination. I am going to ask you some questions and let us discuss them from the administrative standpoint. Who is responsible for the personal health of the boys and girls in the junior and senior high schools? Is there some particular department that is responsible? It has been pointed out here that the biological sciences have a real contribution to make, that the physical education and home economics have contributions to make. What is back in my mind is, that which is everybody's business is nobody's business. Dr. Wood, will you speak to this point?

Dr. Wood:

Health in the high school is not a departmental subject for interest. It is interdepartmental and requires the interest and the placing of responsibility upon a large number of departments and instructors. There ought to be a health committee in every high school. The chairman of that committee in one high school would be the head of the Biology Department, in another high school perhaps an especially qualified nurse and in another high school the teacher of home economics. I believe that the central responsibility, the administration placed on the chairman of that committee would vary with institutions. I am very confident that this procedure is coming. Health in Teachers College, Columbia University, is an interdepartmental subject; health education should be an interdepartmental subject in a professional teacher-training institution. Now, I think that is different in the elementary schools, but I think the same general type of administration that would be applicable to a college, a teachers college or university would be applicable today in a high school.

A health committee in every high school

Chairman:

From what has been said so far, the administrative control should go into the hands of a committee. The chairman of that committee might vary from individual to individual or department to department according to the fitness of that individual.

I would like to add that it seems to me that your principal must feel the responsibility of that program in the last analysis.

Miss Pritchett:

I know of a young man who was called to be principal of a small town high school with the model elementary school in the same building. He holds a master's degree from Columbia. He feels that health education is very necessary. He has not all the subjects that have been mentioned, but he has selected a certain group of teachers to represent the committee. Each teacher is responsible for watching some certain phase of health work in her class. He himself is chairman of the committee. He calls together his entire school one afternoon each week to discuss the health problem. He meets the committee any time they would like to meet with him, or any individual of that committee that would like to meet him. The result is that he is putting over or developing in his school what seems to us a very splendid health program. This principal has inspired that county, not only his own community, but the county, to put in a medical inspector and full-time well trained nurses, and he has been there only a little over eighteen months.

Mrs. Marion Simmonson, Director of Health Education, New Trier Township High School, Kenilworth, Illinois:

Kenilworth, Illinois

I am speaking of the health work from my own experience. I feel our superintendent realizes the importance of health education. He called the faculty committee together, consisting of the heads of the Physical Education Department, the Science Department, the Domestic Science Department, the head of our lunch room and two deans who act as advisors with me, and as the nurse and director of health education, I am responsible for the health work.

Mrs. Florence M. Hobson, Training Teacher of Hygiene, Fairmount Junior High School, Cleveland, Ohio:

I think we have to create an attitude. We have to show in our schools an attitude toward health on the part of all the teachers, developed through watching a health program carried through.

For instance, in one Health Education Department the children's finger nails were manicured, and the class went to the typewriting room with their hands beautifully manicured. The teacher complimented them. The boys went to the print shop, and the printing teacher had his opportunity to speak of the importance of keeping the tips of the fingers in perfect condition for picking up the type, and they had compliments there. They went to the library, and the librarian complimented them on their clean hands.

Dr. Snow:

I had this very problem before me last year. I had to present to a high school a health education program. The principal told me this spring that he was sold to the idea of health education, that every teacher so engaged in his high school must participate in this program and that everything I wanted to put into their program they were glad to take. As I think of correlation, the health education, you have been talking about, comes naturally in an English class or a Latin class and can be brought out by a teacher who has a health ideal. I tell my English teachers that when they teach English to their high school students in a way that makes them see more beauty in literature, that they have taught those students to think more clearly and to think more beautiful thoughts, and at the same time they are teaching mental hygiene. When a history teacher in her history class helps a student to see his place in his community, his responsibility for the betterment of his community, whether he says one word about physical health or not, he has taught health education.

Indirect health education

Miss Short:

There is a necessity for coordination between the heads of different departments who are vitally interested in health education, but it seems to me there is a still further necessity for cooperation and also for meeting between all heads of departments, because if we are to sell health education in the schools we must sell it to the heads of these other departments.

Mr. E. F. Van Buskirk, Executive Secretary, Cincinnati Social Hygiene Society, Cincinnati, Ohio:

I happen to know of a school where there is a health committee, a high school in a large city, but it is not functioning. When you make a study of the situation, you find that it is because two of those persons are accustomed to directing their own departments and will not be dictated to, in any sense of the word, and they find they cannot work together. I think if that happens in one school it is apt to happen in quite a number, and therefore, that it would be most essential to have a coordinated program,—that someone, one with authority higher than anybody in the school, should be able to come in and work with those persons, not dictate to them. They would recognize that higher authority; I believe that there would be a better chance for having the work coordinated, than if it were left to a committee of representatives in a particular school.

Health education course or correlation

I am not quite convinced that it is absolutely necessary to have a course labeled health education. I have been talking more or less theoretically about these matters, I will admit, but it would seem to me that if we have a great many different courses in the school, general science, biology, home economics and all the other courses, it would not be necessary to have a special course on health, provided there were different arrangements made to have certain work required along these lines. In some schools, as you know, students would take either general science or biology, and in these subjects a great deal of health work can be included.

Chairman:

Dr. Andress, will you continue this discussion of the coordination of the several departments?

Dr. Andress:

I want to see threshed out at this meeting the whole subject of correlation. Personally, I believe that it is very desirable to have all of these various subjects contribute to the health and the welfare of boys and girls of the high school, but in many cases too much dependence is placed on correlation. We must

try to define a little more clearly what we mean by correlation and what we expect from it. Now, it is true we may be able to teach health through Latin and geography and history and all these various subjects. I think it is rather too much to expect a Latin teacher to drag health into Latin. To bring health into a Caesar text is beyond my imagination, but I do not doubt but what it is possible. But we have tried our correlation in times gone by and it doesn't always work out successfully. It is true, of course, it may be worked out successfully. It seems to me in the long run we cannot expect to get the results we want by that method alone. What is everybody's business is nobody's business.

I can understand that in a high school that is personally supervised, where the principal has great enthusiasm for the work, or where there is somebody in charge who has this enthusiasm, the work may be correlated by various methods. The question that I want answered is this: can we depend upon this in a general way, or must we plan definitely in the high school for specific instruction so that the boys and girls, when they get through, are bound to have some kind of a background of systematic instruction? Then let the correlation come in. Let the Latin teacher do her work, and the other teachers as well.

I am prejudiced with the point of view that we must have some direct instruction in the high school.

Chairman:

May I put that question to the group? Shall we advocate direct health instruction in the high school? Let us get a vote on that first. (A vote was taken and the majority voted in the affirmative.) Shall we then continue to urge these many departments that have been referred to, to contribute to health instruction? (Affirmative vote.) Now then, what coordination is practicable? What can we do to build up an effective coordination of the various health agencies?

Affirmative vote for both direct health instruction and correlation

Mr. Oberteuffer:

I think we are forced in every situation to meet certain specific problems for which we can lay down no one general scheme. Every high school physical education instructor has his own

particular situation. Every head of the Domestic Science Department has her own particular situation to meet.

In my own opinion those things that we have had suggested to us, such as having a correlating committee—it has been called a health education committee—composed of different people from every department that is interested, to correlate the work, might be a favorable plan.

I am entirely in agreement with the suggestion that we had offered, that in secondary schools there should be a specific time set for health education—I think Dr. Andress made that suggestion, did he not? I think that was his idea—and then let this correlation follow. If we expect to depend upon other departments to teach health I am afraid we shall have to wait for a long, long time before we ever get the work done which we are most interested in. On the other hand, if we, as physical educators or as health educators or as teachers in one department or other, make it a particular point to insure a specific time that can be devoted during the week to the problem specifically of health education, then we will have made a start. We shall have a skeleton upon which to build. The rest of the correlation then will come through the careful direction of the person responsible for this original program. I do not think that the correlation and the use of the other departments are the backbone or the foundation or the most important thing in the teaching of health in secondary schools.

Special time for health education

Dr. McCarthy:

I have observed this matter of the interdepartmental methods of teaching health education. I have never seen it work out well. I have always found it to result, as you suggested, in its being nobody's business. I never saw it get anywhere. Now, I don't mean to say it can't be arranged but I simply have not seen it done. In the New York City high schools there is a special department in each school. In certain of the schools, this is conducted by people with biology interest mainly, in other schools by people whose interests are mainly in the motor activities. In the DeWitt Clinton High School, we have a department that is made up of about ten or a dozen members, including two physicians.

The course in hygiene begins in the second year. This is a school of 8,000 boys and during the first year each boy is required to take either biology or general science. We have secured the cooperation of the head of the Department of Biology and General Science and he has included in those courses the material we have suggested in health education. Beginning, therefore, with the third term there is a graduate course in health education which runs through the eighth term. The third term takes up the hygiene of the day's activities. Then we go on to other courses, the relation of the bacteria germs to health, a course in First Aid and finally we wind up in a course in race and mental hygiene. That is a graduate course. The boys range in age from seventeen and eighteen years to forty-five; there is one boy forty-five years old. He is a post office employee. He works at night and goes to school during the day. We feel that work in race and mental hygiene is of very distinct value.

Race hygiene

This department has been in operation about six years and the results that have been accomplished are very much greater than they ever were before there was a distinct hygiene department. Before that it was very difficult to get anybody to do anything. It was very difficult to find teachers whose training and interest were such that real health education could be put across. Now that we have a definite department we find that persons in other departments are willing to work with us. I think the Department of Health Education in the schools ought to be very much like an octopus with tentacles extending through the rest of the school.

Dr. Moore:

I think the success of the interdepartmental teaching of health education will depend entirely upon the superintendent. If the superintendent is sufficiently sold on the proposition to organize his school and to establish his health committee and to see that the thing goes over, it will go. Teachers in an organization are just like children in a family. They soon size up the source of authority and determine what are the weak spots and also determine what is required. They will come across in exactly that measure. I am convinced that there is enough work in an ordinary high school which would not fit into an inter-

departmental scheme and which we may, for want of a better expression, designate as strictly health work—there is enough of such work to keep busy the most qualified nurse or nurses and teachers of physical education that finances will ordinarily permit being put into service in that school. They will not only be kept busy solving these strictly health problems, but if they have any excess time it will be required to see that the things which we have referred to as coordinated activities are done in the other departments.

I feel that it is absolutely necessary to have a course in health education definitely established in and directed by something which I consider as a Health Department, call it what you will. The health program in the school will have no respect from the other departments unless it does assert itself and have a personnel and a personality. Now just how this can best be done I certainly should not presume to say, but this is the thing which I propose to do in our own situation. We have our own organized department consisting of the four bureaus of medical examiners, mental hygiene, physical education and the nursing, so that we have a definite personnel and personality with which we tie that up, and we have at our command these people who can teach various things.

One plan for a health program

It is my purpose to call together a group which will represent the departments which have contributions to offer, have the people from our own Department of Health list definitely the contributions which they think the other sciences can offer, and the people who come from the other departments list the things which they think their sciences have to offer. Let them list the things which they believe health education will contribute, if there be any, to their departments. Describe these activities, state in detail the things which are to be taught, or which are to be contributed from the departments; then discuss the question as to who is best fitted to present these particular things and whether or not the subject-matter shall be furnished by some one in the Department of Health Education—for instance, whether subject-matter for a teacher in history, shall be furnished and presented by that teacher, or whether the subject-matter shall be furnished by that teacher and presented by one in health education. Now, there are certain things which I think

are outstanding and which may be better done by certain individuals as they are represented in your division. For instance, those trained in home economics may be well fitted, possibly best fitted, to present nutrition. In schools where you have a course in elementary home hygiene or home nursing there are nutrition problems which can be far better presented by nurses. For instance, in regard to infant care, if nurses are available, nutrition might better be presented by them, but the later nutrition of the child might better go over into the Department of Home Economics.

Chairman:

One of the problems that we will have to keep in mind in working out any scheme of coordinating the several health activities is, it seems to me, that these agencies do not reach all the pupils. That is, one agency or one department reaches a certain group of pupils; another department another group; and it seems in our study of the situation that we want to make certain that every pupil gets a systematic treatment of the subject of health education.

Problem of reaching every child

Dr. Moore:

I presume that physical education is required of every pupil in the secondary school, and that it offers the opportunity to build the central theme for health education. There you can put in and tie up the definite things where everybody will get them.

Chairman:

We need to study the school schedule to find out the percentage of pupils reached by the present program. I have a feeling that we have a great amount of good health work going on in the schools at the present time, but that the work reaches a relatively small number of pupils. For example, the nutrition work will reach probably the girls of the school. In some cases there were experiments in which nutrition work was carried over to the boys, but that is an exception.

The next step is, to have each department reduce its program to a definite black and white statement of what it is doing, and examine those programs for duplication and overlapping.

From the standpoint of the administrator, we feel that that is a serious handicap in the secondary school at the present time. We could teach much more if we did not overteach through overlapping and underteach through omissions.

Topic 5: WHAT PUPIL ACTIVITIES IN SCHOOL AND OUT CONTRIBUTE IN ESTABLISHING HEALTH HABITS AND ATTITUDES?

Chairman:

MISS ZIRBES made a remark to me which I should like to quote before we open our discussion on pupil activities. She said, "I am thinking of learning through doing and if that is left out, this learning through teaching, learning through being measured, or seeing the record, is not the whole story. There are certain social activities and things to be done which make for certain health conditions that will never be taken care of by instruction."

Learning through doing

All through this Conference, the importance of activities as a means of learning has been stressed. We are going to open the discussion this morning about what pupil activities in school and out contribute in establishing health habits and attitudes. We have asked Miss Davis to open this discussion.

Miss Carol Davis, Teacher of Home Economics, Highland Park High School, Highland Park, Michigan:

I wonder if we really are following up all the habits that we teach in our various classes. As has been suggested, perhaps it has been a book knowledge. Are we really following up those children to see that they do the things that we teach them to do? I am thinking particularly of a nutrition class because I am a home economics teacher. I sometimes wonder about the girls who are in my classes to whom I am teaching foods and nutrition; as they go up to the lunch room I am astonished at what they choose and I am astonished also at some of their food habits which we have previously discussed in class and in which discussion the pupils have shown real interest. We do stress so much this bad habit of eating between meals and then right

out in the halls after school are dispensed little cakes, little pies and candy. Are we doing the right thing by those children? Is our food nutrition really getting over? Is it doing any good? In the first place, they may know what is good for them but do they have appetites for the kind of food they need? Are we following up the causes which invite that wrong appetite or which destroy the appetite? Many times it is a case of mental hygiene or a trouble at home which causes that lack of appetite and I think this is very important for home economics teachers to follow up.

Then there is rest. Do those children get enough rest? Are they followed up through the nurses' department after the medical examination to see that they get the proper rest besides their night's sleep?

Then I am thinking of exercise. For instance, I had a girl, fifteen years old, in my food class who was very much delighted that she was on the track team. She was ten pounds underweight. She had circles around her eyes and was not strong. She was able to come to school and was not sick but I had asked her to take a nap after school, to have a little extra lunch and to keep regular sleeping hours. She was taking severe running tests on the track which were apt to be harmful but she was not willing to give up the contest. This showed that she did not have the proper mental attitude toward health.

Proper mental attitude towards health

I certainly would like to have somebody discuss the candy problem. It is deplorable in many of the city high schools. I hate to tell this as it might sound disloyal to the school, but it is a fact that last year we earned five thousand dollars profit in the sale of candy in our school. The students are not only doing this, but they are proud of the fact. How can we break up a strong commercial business like that? It really has to be broken up by the students' interest, or rather reached by the students' interest. It could not come entirely through the executive department.

You see our seniors in the Highland Park High School take a trip to Washington, down to Norfolk, and to the Blue Ridge Mountains, and they earn the money for this trip. It takes thirteen thousand dollars, and they earn it themselves. Of course, if they can earn half the money by the sale of candy, they are

not going to be very anxious to put candy out of the school. It must be a very wonderful substitute that will earn half their funds. The candy is very good candy. It is tested in the chemistry department and there is nothing very harmful about the candy itself, but we are creating a wrong habit.

Highland Park, Michigan

I don't want to leave you with a wrong feeling toward Highland Park High School, so I want to tell you a few of the outstanding features which the Home Economics Department has tried to carry out. Every girl is required to take home economics in the seventh, ninth, eleventh and twelfth grades, so we reach every girl before she leaves. We have scales, and every room gets those scales once a month. The girls are very much delighted to get weighed. Each girl has a card on which she records her own weight once a month and these cards are kept by the teacher.

We have a nutrition room for underweight girls and boys which holds one hundred cots. That is not very many for such a large school. We have no school instruction in that room. There is a teacher there to see that they rest and that they get a lunch of milk and crackers. Then they are able to go on to their regular classes and are not retarded as they were in the former fresh air schools. They are simply there to keep their health, to gain weight and to practice health habits.

This rest period, with lunch following, is taken once in the morning (forty-five minutes) and once in the afternoon. If it happens that the rest period coincides with the home economics class, which is a period of ninety minutes, the girl is excused from half of that time (one period) to go to the nutrition room. This is done as a part of her home economics work even though she may lose some of the practical phases of class work. We feel that she is making a special effort to practice the health habits which we discuss in home economics class. On the report card, she is marked in "Nutrition," which represents the effort she has made in the nutrition room; that is, how well she rested, how much she has tried to like milk or other foods, how much cooperation she has received at home. Many times these girls can influence other girls to do these same things at home. The students who are in "Nutrition" are excused from physical training. This is usually quite a sacrifice but, otherwise, there

would not be enough time allowed in the school program to allow for those two rest periods. No one is required to enter "Nutrition"; they go only with the consent of the parents.

I heard one of the teachers make this remark one day, that at the end of the year she certainly was at a loss to know what to do about these girls in the nutrition room. They really ought to fail, she thought. They did not know a thing about food values and just because they were in the nutrition room she had to pass them on. It seems too bad that a home economics teacher could not see that this is a part of the girl's health training and that those girls are getting more than the book learning that is given in class.

Another thing I wanted to tell you about is the nursery school. It so happens that the Board of Education bought some property back of the school in anticipation of an addition to the high school. On this property were several condemned houses which could not be rented but were in fairly good condition. One of these was decorated and fitted up for a nursery school for children of pre-school age, similar to the Merrill-Palmer School in Detroit. A course in child care has been given to senior girls, a required course. The Merrill-Palmer School furnishes at their expense, two teachers who have been trained at their school, and our Board of Education furnishes our elementary home economics supervisor, Miss Alice Wallin.

Required course in child care

Last year, the girls spent one period of forty-five minutes a day in the nursery. This was not always the same period in the day; for instance, one week a girl would be there the first period; the next week she would be there the second period, until she had seen, by periods, a complete day. In order to do this, she was excused from her other classes and made up the work. During the year, she spent one whole day in the nursery. This year, she spends a whole day once a month so that an entire day's program can be more carefully observed. Health habits, of course, are uppermost.

The ninth grade girls make visits to the nursery school during vacant periods, and then they all come together and discuss what they learn and what they see over there. They are given a talk by Miss Wallin as to the purpose of the nursery school and facts concerning the *régime* of the school.

It seems to me that the ninth grade girls are at the right age to study the child—are at the age when they are really interested in children. Most of them have little brothers and sisters, while an older girl would not.

Many of those girls earn money by taking care of children. There seems to be quite a demand now among wealthy people for high school girls to come to take care of their children. It is an education to them and they can also have it correlated with courses of instruction within the school. Many people ask for the seniors who have taken the course in child care at the nursery, since they feel that these girls really know something about children.

It seems to me that our efforts in giving health instruction are futile if we do not actually provide means for the practicing and carrying on of those habits. Merely to preach health without checking up those students to see that they really improve their health, is a waste of time.

Chairman:

Will Miss Rockwell continue the discussion of specific activities?

Miss Rockwell:

Value of clubs and student leadership

I think the clubs in the school can be made very important along that line. Such activities as hiking, swimming, birding and advanced athletic activities may be in the form of clubs, besides a good many others that would have more to do, not with physical health, but with social health. The conduct of school social affairs also has a great deal to do with social health. This is a great problem in most high schools and includes the kind of refreshments served, the manner of dress, and the way the parties are chaperoned.

The student's entry into all activities is important. Student leadership is something which should be very strongly emphasized from the first grade up—in fact from the kindergarten up. I believe it makes a very valuable contribution in the conduct of the school affairs.

The principal in our senior high school the other day asked every student to write a letter expressing an opinion on such subjects as, "What do you think of chapel exercises as con-

ducted this year?" and "Your school spirit." The students were certainly very frank in what they said, and the principal remarked: "This is going to shape my policy for next year and it gives me ideas for various things."

In the student council meetings very valuable recommendations are made and much serious thinking is evident. It has taken a good many years to get the student council.

Chairman:

Miss Henderson, have you something to add to that discussion?

Miss Henderson:

Coordination of activities in school and out

Isn't the very phrase itself, "The coordination of activities in school and out," a pretty good definition of health? When you say, "How can we coordinate the pupils' activities in school and out?" aren't you really saying, "How can we teach the pupil the habit of being in good health?"

One of the serious difficulties in this present period of civilization is that we do not know how to coordinate our activities. We have not accomplished this internationally, industrially or individually.

I wonder if the way to coordinate pupils' activities in school and out is not to make it a settled policy to think out the coordination of these activities with the students, by groups and individually, so that they may get a training in the habit of coordinating their own activities.

Mr. Van Buskirk:

I think that Miss Henderson has hit the nail on the head when she said that what we should do is to teach the child to coordinate its own activities itself. Certainly that ought to be the aim of the work.

The home should be the place for the coordination of the child's activities. That is where the child's individuality ought to be known and studied, and the child directed; and yet we know that most homes are not doing this. Therefore, as in other respects, we are turning to the schools for doing the work that should be done in the home.

I have in mind a few schools where I happen to know that work of this kind seems to be going on pretty well. There is a school in Cincinnati where there is a faculty advisor for girls, who gives a course for girls in health. She includes in that course social hygiene in a frank way. As a result of this, the girls feel free to go to her with their individual problems, and I know that she is doing a splendid piece of work in coordinating their activities—not simply school activities, but outside activities as well. She also conducts class parties, and she teaches them the right conduct in connection with such social affairs. She has charge of the absences, and visits in the homes of the girls.

The agency with which I am connected, the Cincinnati Social Hygiene Society, has been helpful along this line. Our work has not been primarily in schools, although at the present time we are working in forty-six out of the fifty grade schools in the city. Our work has been primarily with teachers and parents.

Social hygiene for parents

We have come into personal contact with more parents than we have with children, and we have worked out a course of study for parents on physical and character education as well. It might be called parenthood. That is now being taken up by individual groups and parent-teacher organizations. I think it is a hopeful sign—that the parent-teacher associations are taking an active interest in this matter of behavior and the study of health in the education of children. Social hygiene, of course, is only one angle of that big problem.

Topic 6: WHAT RESEARCH STUDIES ARE NEEDED TO DETERMINE ESSENTIAL HEALTH CONTENT IN SPECIAL FIELDS?

Chairman:

I AM going to ask Mr. Oberteuffer to tell us something about needed studies and research for health instruction.

Mr. Oberteuffer:

What research studies are needed to determine the essential health content in special fields? May I outline just one or two general principles that I think apply in the consideration of

health content to any type of field,—that is, from the very earliest health teaching up to the college teaching?

If you will permit I will take a step up and consider health instruction with first year college students. There are certain principles and certain facts that govern the selection of health content for college students, and that are very pertinent to the secondary school problem. If the principles of health instruction are valid, true principles, they will apply, no matter what particular age of student we are teaching.

Health content must, in the first place, be directly tied up with the life activity of the student. All we have to do is to consider what Dr. Bobbitt said the other day, and what Dr. Wood has said since, to be really impressed with that fundamental truth, that our health content will be valuable only when it is directly tied up and related to the life interest of the particular student. We go back to that great educational principle that we so often have heard concerning the difference between intrinsic and extrinsic subject-matter. Whenever health materials are divorced from the actual life of the student, then we find it much more difficult to make an impression upon the pupil which will have value. That involves our concept of health. If we consider health as something that can be used by every individual in the fulfillment of his own life purpose then we have a scientific working basis.

Health for the fulfillment of life purpose

If we face a group of college students and tell them that they should be healthy, that they should have fine physiques, good digestion, that they should be immune from contagious diseases, there is a tendency to doubt the veracity of those statements. They will wonder why they should be all those things. But if we can take the potential bankers, the potential business men, the potential school teachers, the potential musicians, and so on, and say to them, "You can be better educators, better bankers, better business men, better musicians, if you follow and understand, appreciate and practice certain principles of personal hygiene," then we have more or less, I think, a working approach to that particular problem. The individuals that we handle are not automatons, they are not simply pieces of machinery. They are living, active individuals. Boys and girls of any age have intelligence. The first manifestation of intelligence is at a very early period in life. The only way that any

learning will ever take hold is through an appeal to intelligence. They must be satisfied in their own minds that this particular thing we are trying to do for them is true and valuable.

In our discussion of the past few days, a number of different ideas and programs for research have been suggested. For instance, someone asked, "What do students of the various ages know about health?" Let us go back again to the college student. "What do college students know about health?" Dr. Wood, two years ago, in an article entitled, "How Much Do College Students Know about Health?" gave us a suggestion. Anyone who happened to be thinking of research work at that particular time was immediately struck with the possibilities of finding out just how much they do know about health. I think a great variance would be found. Some have had instruction, and some have not. At any rate, it is a suggestion for research. I think it could be found out some way; and if we once set up a standard and devise a test or some means of finding out how much they know about health, it will also function very nicely as a check-up on our work, because if we can find out before instruction what they know we shall know what we should teach them.

Health knowledge of college and school student

Correlative to that is, how much do college or high school students want to know about health? Now I am sure that there is a certain amount of material with which you and I are familiar and which you and I as health educators consider a part of our field that does not make any impression upon other people. We also know that there are certain vital, fundamental principles of living that do. If we had studies that would show us the most important thing in the lives of most professional people and laymen, if we could have studies that would point out to us the fact that the most important thing in high school or college minds was the question, "Why should I exercise?" or if we had studies to show us that the most important question in some people's minds was, "Why should I consume a balanced diet?" then you and I could build up our course of study along those particular lines and give them valid reasons.

A lot of people want to know, particular the older boys and girls and the college freshmen, the difference between chiropractors, osteopaths, naturopaths, spectochrome therapists,

and all the rest of the cultists. Legislatures are constantly having to pass upon whether or not they shall be allowed to practice. That is a very vital question. Now if we knew, if there was any way to find out, how many students really want that particular information, it would be very valuable.

Anatomy and physiology in health education

The question has come up as to how much anatomy and physiology should be taught in health education. We are all agreed, I think, from the consensus of opinion as we have had it in the past few days, that there should not be too much anatomy and physiology. What is too much? What is the minimum of anatomy and physiology that can be taught and still gain our objectives in personal health? Is it true, for instance, in order that students should understand and appreciate the value and the importance of consuming a balanced diet, that we have to go into an intensive study of the caloric value of food, or the vitamins? Do we have to know the difference between vitamins A, B, and C? Do we have to know the effect upon the heart and other organs of the body, in order to appreciate the value of a balanced diet? Is it true, for instance, that in order to appreciate the value of being vaccinated, in order to drive home to a miscellaneous group of high school seniors the importance of being vaccinated or to appreciate the value of diphtheria antitoxin, we have to consider the opsonic index? Do we have to consider immunities?

Those of you who have had experience teaching health to college freshmen or high school students know that there are certain things that they must know. That is my third point: Set up the minimum standards of anatomy and physiology.

Dr. Winslow:

Apparently there is unanimous agreement that much research is necessary if we are to develop health education programs in secondary schools which will function so as to secure the maximum in results. I should like to stress also the importance of having any such research conducted according to the highest possible standards so that the value of the data secured will justify the time and effort put into its collection.

If certain types of research, such as those just outlined by Mr. Oberteuffer, are to make a real addition to our stock of

human knowledge, concentrated attention is necessary, many cases have to be studied, and much skill is required for the initial observations and for their accurate reporting, analysis and interpretation. No matter how keen may be the interest in specialized statistical research, it is doubtful in my estimation if we can expect that much independent research can be done by teachers in addition to carrying full-time teaching jobs. For leadership in such research it seems to me that we shall have to depend upon various research organizations, although teachers can do much in assisting these organizations in securing information desired as part of a carefully planned piece of research.

Case studies of health of individual children

There is a special type of study, however, which is closely related to the regular work of the teacher and which it seems to me might well be developed to a larger extent by teachers throughout the country. I refer to the making of case studies of the health problems of individual children. While such studies made in varying ways by teachers may or may not add much to our knowledge of the health problems of the average child, they do help us to know more about the health problems of Johnnie Jones who started life well and strong and who has continued to be so, or of Bobby Smith who started life with certain health handicaps which he has gradually succeeded in overcoming. Most of us are influenced to a far greater degree by a concrete instance than by a figure for an average in a statistical table, and I should like to make a special plea that teachers write detailed descriptions of what they know about the health progress of certain children, both as a means of helping them to understand the health needs of these and other children, and also as a definite contribution to our knowledge of actual conditions in the terms of individual children living in different parts of the country.

Chairman:

I think Dr. Winslow has given us a real summary.

Let me say to the various members that have participated in this discussion that I appreciate their cooperation.

Dr. Wood, you have a contribution on this subject of studies which are needed for the secondary age level. May we hear from you?

Dr. Wood:

With reference to the general program for the high school, I feel in connection with what I suggested some time ago, that we need to know about health growth in adolescence. That means that we need scales of health habits and attitudes and knowledge. I am sure that that will be easier—though it is not very easy—than to experiment and measure the results with different programs and instruction in this field of health. We need very much to understand, for example, the objectives, the goals that will appeal most to the boys and girls in the high schools.

If I am right at all there is no phase of the whole problem of physical educational activities today that presents more difficulty, that is less nearly solved, than a satisfactory program of physical training for high school girls. I think we need careful studies thereby trying different types of program. I am sure we need careful studies with some form of controls and with agreement upon some measuring rods that can be used to record the conditions before and after the study is conducted, in order to find out how nearly we have accomplished the results that we have in mind. That sounds rather vague. I should like very much to see a study of the characteristics of the healthy boy and girl at the beginning of high school, physical, mental, social, including Dr. McCarthy's mental hygiene. I should like to have set up the characteristics of that boy and girl on leaving the high school.

Physical, mental, social study of healthy child

In other words, the simpler thing, I think, is to find out these characteristics before we attempt to carry on the more difficult studies of selection of interests, of materials, of goals, and the experimental programs by which we attempt to help these young people in high school to attain these goals. As an illustration I should like to cite the report which is to be presented at the National Education Association meeting next week on, "The Conservation of Sight in School Children." It attempts to set up very definitely what is normal in the sight of children in school and what is not normal. It is an attempt to get a definite standard, more easily done in vision than in mental characteristics. It lies along the line of the studies that we need. That study has involved three years. It involved questionnaires sent out to two hundred, careful tabulation of the returns from

sixty, of our American specialists in that field and in the working out of simple standards of what is normal. We need to know better what are the characteristics of the normal boy and girl in high school and to understand the departures from that. We need to know what boys and girls, who are healthy, will be doing and, then, we need to know the effect as far as we can find out of various types of procedure.

Summary of Section I

THE HEALTH PROGRAM IN SECONDARY SCHOOLS

THE purpose of health instruction in secondary schools is to develop and maintain the health of the individual pupil to the optimum level, and should be measured ultimately in terms of the degree of individual health rather than in terms of subject-matter learned, habits acquired and activities performed. Some such measures as the following might be used:

Number of absences because of illness.
The percentage of defects found in health examinations and the corrections secured.

The close connection between examinations and health instruction was clearly brought out through the value of direct application of health rules given by the examiner during the time of examination. This fact led up to the importance of considering the time element as demonstrated by the two extremes actually found in an extensive survey made in eighty-six cities during 1923–24 ranging from six children examined by one physician an hour to eighty children. Emphasis was laid upon the necessity of a thorough understanding of the physical, mental and social needs of each student, this understanding to be reached only by the cooperative efforts of all concerned. The importance of making a thorough study of all so-called problem cases and basing special adjustment of health conditions on the findings from these studies was clearly brought out. Personal health services were divided into:

Inspection
Examination
Reports
Follow-up work

The importance of school sanitation was emphasized but the subject was not discussed in detail.

Health instruction in the secondary schools is concerned with positive constructive health building. It does not primarily deal with disease, except from the preventive point of view.

The curriculum in health education should be inclusive in its work, including attention to the pupils' personal health, school hygiene, community hygiene, and industrial hygiene, providing for the mental, emotional, social and physical well-being of secondary school pupils. It should provide means of acquainting children with the health-conserving resources available, the public health services, forms of medical and surgical aid, nursing and hospital service, and with means and conditions for using them.

The curriculum in health instruction should indicate points of contact with other subjects, the content of which has health values and should suggest methods of incorporating such values, in developing health habits and practices.

The activities, related subject-matter, and outcome should be graded to correspond to the respective levels of interest, capacities and health needs of children in so far as they are liable to participate or cooperate in controlling health practices and conditions. With younger children, health habits may be developed before they are able to understand related health knowledge; as they grow older, health knowledge may be increased and health practices rationalized. The gradation of materials should be such that the pupil comes to the secondary school with well-established health habits. The course of study of the junior high school might well center upon the social and community aspects of health—healthful living in the home community, the school community, and the larger community life. The senior high school should provide the scientific foundation for health habits.

Health instruction should aim to stimulate ideals of health and to develop a health consciousness in secondary school pupils which will assure, in school and later life, that abundant vigor and vitality which provides the basis for the greatest possible happiness and service in personal, family and community life.

Everyone in attendance was asked to list the minimum

essentials in subject-matter for health education in secondary schools; the items fell into three groups:

1. *Fact knowledge:*

   Sufficient knowledge of structure and function of the body to understand laws of health.
   Knowledge and scientific principles of health habits.
   An understanding of biological processes, reproduction, eugenics, etc.
   Knowledge of the common defects and remedial measures.
   Elements of nutrition.
   Elements of mental health.
   Elements of school hygiene.
   Elements of home hygiene.
   Elements of community hygiene.
   Elements of industrial hygiene.
   Elements of safety education.

2. *Direct application of knowledge through activities:*

   Application of health knowledge in personal and bodily care.
   Application of health knowledge in recreation.
   Application of health knowledge in school community.
   Application of health knowledge in home community.
   Application of health knowledge in study,—home and school.
   Application of health knowledge in food selection,—home and school.
   Application of health knowledge in physical education activities.
   Application of health instruction definitely connected with the periodical physical examination, with follow-up work and with the importance of such examinations in adult life.
   Child care.
   Simple nursing procedure.

3. *Application of knowledge for adult life:*

   An appreciation of the individual, social and economic value of health.
   Knowledge of the functions of the city, county and state in health instruction.
   Knowledge of national health legislation and services.
   The development of a health consciousness and a sense of responsibility for individual health and community welfare.

In answer to the question "What departments have contributions to make?" the following list was produced:

1. *The natural sciences:*

Chemistry
Physics
Biology
Botany
Zoology
Anatomy
Physiology
Geology
Geography

The specific contribution of these should be: Knowledge of origin, structure, functions, and care of the health of the individual.

2. *The social sciences:*

History
Civics
Economics

Contributions: Knowledge of effects of social and governmental agencies on community development, as for example the tribe as compared with the world's population centers, and their health problems.

3. *The applied sciences:*

Home Economics
- Hygiene
- Sanitation
- Nutrition
- Housing
- Clothing

Physical Education
- Developmental
- Recreational
- Corrective

Medical
- Health instruction—personal
- Prevention and control of disease

Nursing Service
- Personal instruction
- Infant care
- Home care of the sick
- First Aid

Some of the practices reported for insuring better health habits were:

1. A short, informal discussion of health problems when needs arise.
2. Instruction by individual teachers in connection with the different school subjects.
3. Organized courses in health instruction.

The general consensus of opinion in the discussion of coordinating health instruction was that health should be a fundamental aim in the school program, including the operation of the school plant, the subjects taught and the schedules, all of which should contribute to the mental and physical well-being of the pupil.

The selection and organization of the contributions from these several departments for health instruction should be placed in the hands of an interdepartmental committee. This committee should be directly responsible to the person in charge of health education, whether this be the superintendent of schools, the principal of the secondary school, or someone especially assigned.

Basic in the health program is a health consciousness on the part of the teaching body. A health consciousness should be displayed in the teacher's attitude toward the pupils' health conduct and her own personal health.

It was unanimously voted that it is desirable to have one or more courses for special health instruction in addition to the placing of emphasis on health instruction in related courses.

The following points were brought out in the discussion connected with this formal action:

1. Importance of organization of all work to create a desirable attitude toward health.
2. Importance of setting up definite aims and objectives in health instruction, in connection with the establishment of special courses and relating to existing work.
3. Importance of studying present work before establishing special courses, in order to determine the extent to which these health aims are realized, emphasis being placed not only upon subject-matter, but also upon:
   a. The school schedule
   b. The extent to which the present health program reaches the whole student body.

4. Importance of avoiding duplication in health instruction and health responsibility.
5. Danger of making these special health courses, textbook courses, and not related to real life.
6. Importance of realizing the analytical attitude of children in the senior high schools, and their readiness to appreciate the health significance of much that is being taught, without this significance being specially stressed.
7. Necessity for individual work on health improvement as well as class instruction, emphasis to be placed upon helping the students to work out their own plans for well-coordinated activities for healthful living.
8. Suggestions that instructors in different departments cooperate in giving special health courses, if this cannot well be carried by a special health instructor in health education.

Lists prepared by all members of the group brought out the following activities which contribute in establishing health habits and attitudes:

1. *Within the school:*
   - *a.* Following recommendations in classes for desirable dietary standards, in selection of food at school cafeteria, refreshments at school entertainments, omission of use of candy between meals, etc.
   - *b.* Following recommendations for desirable standards of personal cleanliness.
   - *c.* Following recommendations for desirable standards of dress.
   - *d.* Following recommendations for desirable standards of physical activity and rest.
2. *Outside of school:*
   - *a.* Out-of-door recreation, with emphasis upon individual participation in "big muscle activities."
   - *b.* Sufficient rest and sleep.
   - *c.* Regular and adequate meals.
   - *d.* Observing and assisting in the health care of infants and young children.
   - *e.* Securing correction of physical defects, and following special recommendations for personal life based on results of physical examinations.

How can these activities be coordinated? The most effective means for the coordination of pupil activities in relation to health are:

1. Development of faculty responsibility for the study of the individual health needs of the students, and special

service in promoting desirable health activities in relation to their individual needs.

2. Development of student responsibility in following desirable procedures in health activities, both in school and outside of school.

The above summary is a compilation of those prepared daily during the Conference by the following committee:

Dr. A. S. Barr, *Chairman*
Miss Ethel Perrin, *Secretary*
Dr. J. Mace Andress
Miss Willie Dean Andrews
Miss Carol M. Davis
Dr. Fred Moore
Mr. D. Oberteuffer
Dr. Ada E. Schweitzer
Mr. E. F. Van Buskirk
Miss Emeline S. Whitcomb
Dr. Emma A. Winslow

Recommendations from Section on Secondary Schools

As an outgrowth of the discussions, the following problems were suggested for further consideration as needing constructive study, investigation and research.

Constructive Study

1. What are the specific contributions of each of the several secondary school subjects to the health program and what methods can be applied for their coordination?

There is a large number of subjects which may assist in health teaching. At the present time, these subjects are not coordinated and consequently, there is lack of efficiency and a good deal of duplication. Studies of this problem would suggest a definite amount of health material that might be taught in the various subjects and would suggest a feasible general plan of coordination between courses and between departments.

2. What are the specific opportunities offered in the secondary schools for the learning of health practices and precepts by the actual doing thereof?

There is a great variation in the facilities and in the range of activities offered by secondary schools which make possible the practice of carrying out the health instruction. Studies of this question ought to stimulate the placing of hygienic equipment in school buildings and indicate the proper use of the same.

Investigation

1. What are the specific health practices, habits, knowledge and attitudes possessed by entering secondary school pupils, and by pupils graduating as well as entering?

Before an intelligent plan of judgment regarding a health education program for secondary schools can be formulated, we must know the present status of individual pupils regarding health practices, habits, knowledge, and attitudes. It is suggested that individual tests be carefully devised so as to determine the rating of each child.

2. What are the specific health interests of secondary school pupils?

Realizing that secondary school pupils have, in addition to the equipment suggested above, certain desires or interests in health which have not been met in their previous training, studies of these will make it possible to draw up an intelligent program that will meet specific needs.

3. What are the specific physical defects and deficiencies of entering secondary school pupils?

The health correction and development program cannot be effectively applied through mass attention, but depends upon an accurate knowledge of each individual case.

Research

1. What are the minimum essentials of content of health instruction for secondary schools?

At the present time, health instruction courses vary greatly in their content, some greatly exceeding the amount of information necessary and some falling short of meeting the actual needs of secondary school pupils. Such investigators would set standards of instruction which would determine the minimum content of instruction which should be received by every secondary school student.

2. What motives are most effective in interesting secondary school students in forming health habits?

Up to the present time, health education in secondary schools has not always been based upon sound psychology. Use should be made of studies of behavioristic tendencies of this age group. In order to make the health education effective, it must be based upon scientific analysis of motives pertinent to the age of secondary school students.

3. What are the causes of absences because of illness?

4. To what extent does the health instruction in present courses reach the whole student body?

Section II

TEACHER TRAINING FOR HEALTH EDUCATION

In the meetings reported below the following persons served as Chairmen at different times:

Dr. William B. Owen
President, Chicago Normal College
Chicago, Illinois

Dr. Thomas D. Wood
Professor of Physical Education and
Advisor in Health Education
Teachers College, Columbia University
New York City

Mr. John W. Shepherd
Assistant Principal, Head Department of Science
Chicago Normal College
Chicago, Illinois

Dr. John D. McCarthy
Instructor in Health Education,
School of Education
New York University
New York City

Miss Emma Dolfinger
Director, Division of Health Education
American Child Health Association
New York City

Secretary: *Miss Lucy Oppen*
Staff Associate, Division of Health Education
American Child Health Association
New York City

Topics:

1. The Health of the Teacher.
2. Health Education Subject-Matter (Undergraduates and Teachers in Service).
3. Organization of Health Education Subject-Matter for the Teacher in Training.
4. Training in Health Education for Teachers in Service.
5. Methods in Teacher Training for Health Education.
6. Consideration of Rural Problems in Teacher Training for Health Education.

Summaries.

Topic 1: THE HEALTH OF THE TEACHER

Chairman: Mr. John W. Shepherd

Chairman:

WE are meeting in a sort of symposium to consider one of the most fundamental things in connection with the work of schools, that of health education. This group is concerned with the teacher training aspect of this problem of health education for children and as a first step we shall now consider the health of the teacher.

In the short time at our disposal it is the high points that we want. Will Dr. Holmes open the discussion?

Dr. Abby Virginia Holmes, Head of the Department of Health Education, Slippery Rock State Normal School, Slippery Rock, Pennsylvania:

Slippery Rock, Pennsylvania

The aims and objectives have been discussed. Health education is a matter of experimentation. We are now groping for standards. We want a plumb line by which we can work.

Let me summarize very briefly my own experience in making the physical examinations of the teachers in training in my institution. We found about 40 per cent of them had physical impairments of one kind or another. I think the eye defects stood out most prominently. Next, I was very much concerned, amazed and chagrined to find the very large percentage of very poor teeth. Digestive troubles were next in number with a moderate number of chronic appendicitis cases, constipation and resulting attacks. Next came nervous conditions. There were a few ear defects. There were very few heart defects. We grouped our students in zones, any weight in the normal zone being considered a normal weight; 20 per cent above or over being called "overweight zone"; between the normal weight and 7 per cent below that, being the "border line zone"; and below 7 or 8 per cent below being considered the "danger zone." Many of those examined were underweight. Whenever they reached the danger zone we were very much interested to know why.

That is the situation that came to me through examination of the teachers in training. If our student teachers are going to take charge of children they must restore their own health, and they must exhibit practice of good health, that they may know what they are talking about and that they may be an inspiration to the children.

Dr. J. Mace Andress, Lecturer on Health Education, Boston University and Boston School of Physical Education, Boston, Massachusetts:

Today we are thinking more and more of life in terms of desire. Desires are the great driving forces in life, and there are at least two desires of life that stand out,—the desire to be free from physical defects and to live a long life, and, second, the desire for happiness.

Now, I am not going to try to define happiness. It is a mental state. If one is able to meet in a satisfactory way the various situations of life as they are presented, without undue strain, then one is a happy individual. In other words, happiness in a general way is an index of the way our life functions. It may perhaps be fair to assume that the healthier the physical body is, the greater the possibility of our achieving happiness. It is not always so. There are other factors.

Most people do not stop to think what a difficult thing it is to adjust ourselves to the world. Here is a child growing up. His problem is, to adjust himself, how to gain success and get along with people, how to avoid being jealous, how to avoid falsifying, how to grow up and meet the world and still have a sweet, serene mind. It is a difficult feat, and it is no wonder the strain being so great, that a great many people fail. One may live a long life, but he may not be happy, not useful to the community, or of service to the world. The quality of life is worth while as well as the length of life.

Adjustment to one's environment

There is one other point I should like to make, and that is that knowledge does not bring happiness. We are obsessed today, more or less, not so much with knowledge but with this peculiar thing called the I. Q. But we find that unhappiness in life is not due to any great extent, to a lack of intelligence. Happiness to my mind, means the complete adjustment one has

in relation to his environment, which takes us immediately into the realm of the emotional side of life. The emotional responses that one makes to the world round about him are much more significant than what one knows.

As teachers we must consider if the pupil is getting the right attitudes toward those things in life that are worth while. The question before us this morning is the question of preparation of those who are about to go into the work of teaching.

Now, I think it is no exaggeration to say—and I have been teaching psychology myself—that most of the psychology we teach never gets under the skin. It doesn't tell us very much about the way of living. We shall never be able to understand the mental kinks that children have, it seems to me, until we become greatly interested in our own, and straighten out some of our own kinks. We never know in what peculiar ways the mind works until we begin to make some kind of analysis of the human mind. I therefore submit that one of the first things is, as far as possible, to keep in touch with the student body, and see that they are making the proper adjustments to life.

Miss Anette M. Phelan, Teacher of Health Education, State Normal School, Athens, Georgia:

Athens, Georgia

We see our problem as that of preparing young women to go into the public schools of the country to help the children get the ideals of health and to live daily in accordance with those ideals. We believe that to do this the teacher, herself, must have a positive attitude toward health and so plan her life and live it as to be an example of her gospel.

In our work in the normal school at Athens we had almost 700 young women from Georgia and the adjoining states. The first step taken in the organization of the department was a thorough health examination for each student. At the close of the examination the data were compiled and the students grouped on the basis of handicaps found. In Group 1 were placed those students with health handicaps, the removal of which depended upon an operation or upon treatment by a physician or dentist; into Group 2 fell those with handicaps, the removal of which demanded, in addition to whatever medical care might be needed, the cooperation of other factors of school life, as living arrangements, diet, opportunity for rest, and

physical education; and in Group 3 were those students with health handicaps for the removal of which the chief need was an effort on the part of the individual, together with sufficient time for the effort to show results.

Group 1 was turned over to the school nurse and the dormitory matrons who had charge of the follow-up. Our school is largely composed of young women coming from agricultural districts hard hit by the activities of the boll weevil and who could ill afford the expense of an operation or the attention of a high priced specialist. Consequently Group 1 wherein the attention of the medical or dental specialist was necessary, did not make a good showing in the removal of health handicaps. However, the 154 students with nasopharyngeal handicaps showed a 20 per cent removal, those with dental handicaps a 65 per cent removal, and those with vision handicaps a 50 per cent removal by the end of the first semester.

In Group 2 where many factors, more people and the cooperation of other departments were involved in the removal of the handicaps, the progress was also slow. In this group those with the handicap of malnutrition showed a removal of 30 per cent and those with dysmenorrhea a removal of 35 per cent of handicaps by the close of the first semester.

In Group 3 where the chief factors were effort of the individual through a given period of time, the best progress in removal of handicaps was made. By the end of the first semester, 85 per cent of the handicaps of constipation and 50 per cent of the handicaps of faulty posture had been removed.

It was indeed gratifying to those of us who were interested in helping those young women to acquire normal physical condition, to find that of the 1374 handicaps found during the examination, fully 45 per cent had been removed. Many of the handicaps need still more time to insure removal. In 10 per cent of the enrollment no apparent effort was made toward the removal of handicaps.

Removal of handicaps

Mrs. Norma Selbert, R.N., Assistant Professor, Department of Public Health, College of Medicine, Ohio State University, Columbus, Ohio:

May I ask whether they strip the student for an examination, or whether the examination is made with the clothing on?

I think making an examination with the clothes on is just as silly as trying to examine a machine without lifting the hood.

Dr. Holmes:

I think it would be impossible to weigh and measure accurately in an examination, without stripping the student.

Dr. J. Anna Norris, Director, Department of Physical Education for Women, University of Minnesota, Minneapolis, Minnesota:

Minneapolis, Minnesota

In the University of Minnesota the teachers are not supposed to be in training until they have had two years in the institution. The students have their first examination for which, of course, they are stripped, at the time of their entrance in the university. It includes an examination of heart, lungs, thyroid, abdomen, posture, strength, eyes, ear, nose, throat and teeth. This examination is a thorough physical and medical examination; haemoglobin per cent determined, an analysis of urine made, and a Schick test for diphtheria susceptibility. They are pretty thoroughly gone over from head to foot by the end of that examination. The results of the examination are summed up by a physician and students are classified according to what physical exercises they should take, as to what curable defects they have, or as to any defects that they have at all. Later they are called in for further checking up on defects of health by the University Health Service or by the Department of Physical Education for Women.

Now at the end of the second year these students go through a physical examination which is pretty nearly as full as the first one; it is quite as full as the first for those for whom it is indicated. By the time the students are juniors they are usually at least average as to physical condition and I think that is partly because the juniors are somewhat picked, of course, intellectually, and they are thinking more carefully about how to keep themselves well. So far as their mental and emotional points go, they are an improvement over the freshmen.

Of course, they are dependent largely on environment. That environment is pretty good. In regard to clothing, they are sensible. Most adults are. In regard to exercise and sleep they

are not sensible. Their exercise and sleep are pretty well squeezed out of their program. They respond to the situation, not to any principles which they themselves have. So far as I know, that same thing holds also with teachers in service who come back again for study in the university. I am impressed by the fact that they are worn out before they come, and being already worn out they cannot get the habit of taking life more easily, and so they proceed to wear themselves out still further when they come to the university.

All the university requires in hygiene is a lecture course of twelve lectures. In regard to suggestions for improvement, I would suggest that there ought to be a requirement in exercise, running through all the four years, that in the curriculum, there should be certain minimum essentials required, but there should be a wide range of electives, too. But this ought all to be under supervision, and so far we cannot afford to do it. We have neither the space, time nor the personnel to do it, but it seems to me the thing to be done. I think you are putting a premium on falsifying if you ask the student to report on what she has done outside, without supervision, just as when you ask her to report by a hygiene sheet on her habits of life.

We did that, and we did it very thoroughly for four years. Freshmen are an unsophisticated group, and judging by the number of students who reported things they knew we didn't approve and for which they were called to us in consultation, we thought we were getting somewhere, but as soon as the sophisticated sophomores were called in, we noticed very few bad habits being reported. Not only that, but it spread down to the freshmen, and we soon had very few consultations with the students. I don't know whether this might work out better in other places.

Rating personal characteristics

I have also been very much interested in the rating of students' personality characteristics. In some institutions every student in the class gives a rating for every other student in the class, of course anonymously, regarding her personal characteristics, and this helps the faculty very much in rating personality.

In regard to the teacher in service, the Business Women's Club in Minneapolis has shown me that a large group will take

Organized recreational exercise

the opportunity to take recreational exercise, coming out for bowling, swimming, skating, golf lessons and various other activities, if there is some way it can be organized for them, and I believe there is a real responsibility for the departments of education in cities to try to devise that sort of thing. If they could supplement that by physical examination and advice at low cost, that also ought to help a lot in bringing up the health of the teachers in service.

In regard to physical education teachers, they are physically above the average naturally, as student teachers and as teachers in service, but they are likely to be killed off by their superintendents or principals by being given such a tremendous load of extra-curricular work to do. Every school considers that physical education teachers can do anything others cannot do because of their good health, or they wouldn't be in physical education. From too heavy a load of after school activities, which sap their strength and prevent their devoting time to professional advancement, I think they ought to be protected.

Chairman:

Miss Pritchett will now be asked to report on some nutritional work done in the State of Pennsylvania.

Miss Katharine A. Pritchett, Consultant in Administrative Nutrition, State Department of Welfare, Harrisburg, Pennsylvania:

The introduction of nutrition education as a required part of the Pennsylvania school curriculum was not an easy problem. The state, at the time nutrition was introduced, had not recognized home economics as equal in importance to the better established subjects. Naturally this made it more difficult for nutrition instruction to enter.

The approach was made through a visit to each of the fourteen Pennsylvania state normal schools for the purpose of discussing with the principals the possibilities of a nutrition program. These visits revealed that the principals were not interested. They were sure that such a subject would not be of value to the students; and that, moreover, the curriculum was too overcrowded to admit another subject.

One day a principal unconsciously opened the avenue through which nutrition was to become recognized as one of the most important departments in the normal school. After my attempt to interest him in nutrition education he courteously expressed his lack of interest and began to talk about what to him was the real problem. This principal was battling with a poorly equipped, unorganized Foods Department which was causing dissatisfaction among the student body.

I recognized for the first time that a harmonious, efficient and economical food administration was the avenue through which nutrition education was to enter the curriculum. Shortly after this visit the conference of normal school principals invited me to outline the nutrition program at its bi-monthly meeting. In brief, the program combined the administration of all divisions of the Food Department, and nutrition instruction as it relates to health, under one person qualified by training and experience to carry both the administrative and the educational phases of the work.

Nutrition program in Normal Schools

Mansfield State Normal School welcomed the program, saying: "That's the thing I have wanted for eight years! I have the money; you get the woman." A scientifically trained woman with executive ability was appointed, and with the cooperation of the principal we quietly and unobtrusively put over our program. Other principals watched, and eventually all but three accepted our administrative policies. These progressed, gaining favor as they developed. The principals soon came to see that food waste, and hence the food budget, could not be materially reduced until the students were taught the relation of food to health and beauty—especially beauty—and were willing to eat all foods. This revelation caused the normal schools to offer nutrition as an elective the following semester.

This decision, as indeed the entire nutrition program, was strongly supported by the State Superintendent of Public Instruction and by the State Director of Teacher Training.

During the following years the nutrition instructors by their good work proved not only that nutrition was a phase of health education, but that it was essential for health. A further advance was made through a closer affiliation of the nutritionists and the physical educationists.

The nutrition cause was further promoted at this time by the work being done by normal graduates appointed to teach in rural and town schools. They had elected nutrition, and, as teachers, were successfully campaigning against malnutrition among children of their respective communities. True to their instruction, they had not attempted to overcome malnutrition by feeding alone, but by right feeding combined with hygienic living and happy environment.

The nutrition instruction was practical. Sanitary conditions in the Foods Department, the type of food purchased, the method of cooking, the planning of menus, table service and table etiquette, all exemplified classroom instruction. Several schools replaced the oblong table seating twelve with the round table seating eight, because the latter increased sociability and permitted of instruction in table manners. Once a semester each nutrition section was allowed to plan the menus for one day. These were served in the diningroom and were subject to constructive criticism by the faculty and by the rest of the student body. Each class was on its mettle to present a healthful, appetizing menu, planned to suit the needs of the guests and in accordance with our present knowledge of nutrition. Faculty and students were equally anxious to criticize intelligently.

Improved food habits

This, more than any other phase of the course, improved food habits of both the faculty and the student body. Gradually fresh vegetables made inroads on the ever present meat and potatoes; milk partially dethroned coffee and tea; salads and whole grain breads won their way; fruit or light nutritious desserts cautiously but surely replaced heavy pies and rich pastries in all but three schools. Even the hot dog lost favor—at least when not seen in the open.

Some schools conducted special tables for the malnourished and the obesity students. These were much appreciated because of the satisfactory results obtained. Weighing and measuring, combined with nutrition instruction, led to a desire to have medical examinations made, to visit the dentist more frequently, and to call for the mid-morning glass of milk and graham cracker.

Various schemes for getting the students down to breakfast were promoted with fair success. In some schools many of the students were in the habit of not eating breakfast. In-

stead, they would stay in bed and allow only enough time before class to hurry to the candy counter, buy a chocolate bar, and eat it before entering the classroom. On one occasion, in reply to my protest against such procedure, the bursar said, "This brings in quite a revenue. Why do you want to stop it?"

The "home box" and the "after-the-lights-go-off" feeding parties provided all sorts of thrills; but nutrition instruction, together with the splendid cooperation of the deans, both men and women, cost even such pleasures some of their popularity. Nutrition is only one factor, but an important factor in developing a strong body. Therefore, nutrition instruction, along with other health courses, showed the need for those improvements in the school plant which would make it possible for students to live more hygienically: an adequate number of bathrooms; more bedrooms, so that only two students would occupy one room; proper and sufficient lighting; correct ventilation in classroom and bedroom.

Nutrition and the student load

Principals and faculty began to see the relation between a student's state of nutrition and his "student load" and physical education and assignments.

Day students had been in the habit of eating cold lunches brought from home, in a classroom or in a room in the basement. Soon many schools opened cafeterias for the day students where they could buy all or a part of their lunch. Other schools provided tables in the main diningroom for this group, and allowed them to purchase one or more hot dishes to supplement their cold lunch. The day students felt that this was most helpful in preventing winter illnesses, which had been prevalent among them.

The main kitchen prepared a hot luncheon to be served all training school children who remained in the school during the lunch hours; special attention was given to the malnourished group. This service led to a request for the nutrition instructor to give food lessons in the training school. Because of her many duties this was not possible. However, by acting in an advisory capacity she was able to promote a health habit program in which all of the health education instructors of the normal school and the classroom teachers of the training school were invited to take part.

Normal school graduates are now promoting health pro-

grams in elementary schools throughout the state, and nutrition is a popular phase of these programs. In some sections of the state, school directors will not employ teachers who have had no training in nutrition.

High schools are increasing the amount of nutrition instruction given in home economic courses, and are including it in general science and hygiene courses. Quite a few high schools have reorganized their cafeterias to reflect both the nutrition instruction and the food administration program promoted in the normal schools.

In the normal schools, the nutritional value of food and the requirements of the menu have become the basis of food purchase; food storages and refrigerators have been built and organized; food is kept under lock and requisitioned on basis of menu requirements; food preparation and service have been made more attractive; food waste has been greatly reduced; job analyses have resulted in more efficient service and a reduction in the number of employees. All this has led to a more harmonious, economical and efficient food administration, and to marked financial savings.

Better health of faculty, student, and community

However, improved food administration has been only the means to an end—better health of faculty, student, and local community. In the normal schools, food habits—hence health—have been improved. Nutrition instruction in the public schools has reached into the home and improved the health of the family.

The accomplishments of the normal school program has led the State Secretary of Welfare to use it, with adaptations, in state institutions coming under the supervision of this department. I now have the pleasure of promoting this program.

Chairman:

We will continue with a message from Miss Juliet Bell.

Miss Juliet Bell, Director, County Health Education Demonstration, Western State Normal School, Kalamazoo, Michigan:

A year ago I was with the Michigan Department of Health when a representative of the American Child Health Association visited that department and the State Department of

Public Instruction in the interest of health education. As a result of that visit these two state departments undertook a co-operative demonstration in health education. My work in this demonstration includes supervision and organization of health education in some rural schools and the furtherance of health education in Western State Normal School.

Much needed health program

The immediate question was, "What is the status of the health of the students and what do they need?" There was neither doctor nor nurse in the school so that the health condition of students could not be determined. There was no systematic check-up on absences from class by which causes might be studied to help determine some of the health needs. There was no means in the curriculum by which habit needs might be determined such as might be done in a personal hygiene course which reaches all or a large part of the student body.

This is not at all a criticism of this particular normal school. It is probably true of most of them. There were many members of the faculty including the president who had felt the need of an efficient health service, and upon their sympathy and co-operation depended the success of every health activity suggested. As was said to me when I suggested to the president that the need of a doctor and nurse was urgent, "You know we all want it, but we want and need a lot of things that we can't have just now." It was evidently a question of what was the most urgent need in the school, and it was now a problem of proving the urgency of this need by disclosing actual conditions.

With the aid of the Dean of Women a health questionnaire was conducted with about 750 of the women students. As with most questionnaires, this did not reveal everything but it helped to focus the attention of students on health and it did bring to light some interesting data. One item in particular was that most of the students chose for leisure time a sedentary pastime rather than an activity.

My suggestion that we reorganize the Health Committee into a Health Education Committee to include the Dean of Women, a member of the Biology Department, the Head of the Training School, a member of the Home Economics Department, a member of the Physical Education Department and

myself was readily accepted. That committee concerned itself immediately with some of the health problems of students.

One of the early problems considered was the effect of heavy outside work on the health of students. The purposes were to get data, if possible, for recommending adjustments of curricular loads where the student must do heavy outside work and to find out some of the real health conditions of students. For this study a small group of students who worked for room and board was chosen and a check group who did no outside work was chosen of similar curricular load, I.Q., and physical condition. A doctor from the State Department of Health was gotten without charge to make the examination of these students. A health examination was made at the beginning and the end of a term. A term isn't very long, but we used the time we had.

Some of the findings of the doctor were spectacular and convincing. And as a result of this study the president said, "We'll have two nurses and a doctor next year, if we need them. We will have in the fall term the beginning of a health service with a doctor and nurse."

Outside work and its effect

The data from this study has been sent to the Metropolitan Life Insurance Company for analysis to be used by the Health Education Committee for its recommendations. It is possible that this study will need to be carried farther to include large numbers of students in order to warrant generalizations. Out of curiosity I examined the health records before sending them away and found that 96 per cent of those students working for room and board had physical defects, whereas only 74 per cent of those not working had defects. Furthermore, there were more defects per person in the working group.

Another problem taken up by the Health Education Committee was a study of the housing conditions (we have no dormitories) of students. For this we scored all rooms registered with most encouraging results. Students can live in those houses only which achieve a certain score.

This is just simply to tell how we got at conditions to reveal definite health needs.

Our next problem is to show the need of health in the curriculum and to increase student activity outdoors. I now carry

on class work in health education but we need more health in several departments of teaching. And in working out this problem I anticipate the same splendid cooperation from the president and faculty that made last year's work so vitally interesting and gave to it the success that it had.

Miss Mary P. O'Donnell, Instructor in Health and Physical Education, Skidmore College, Saratoga Springs, New York:

Saratoga Springs, New York

Ours is a small, girls' college of about 416 students. Dr. Greenough, who is the head of the Department of Health and Physical Education, has been conducting an experiment to try to ascertain, if possible, the academic load which the student must carry with the more technical courses, to correlate the health education program; for in such cases a health program with a college degree is a very serious problem. We first tried to adjust the actual, essential points in the program so that the student load might be less.

We began by organizing a student health plan. Ours is a student organization and the student government directs the activities of the students. Dr. Greenough suggested that the work be started through the Athletic Association, with the president as chairman of the Health Plan Committee chosen by the General Committee. That committee asked each class of the four college years to choose committees and submit health plans for an improvement of the student health. Those four plans were gathered together by the General Committee, and one plan was adopted for the college. This plan was to cover the daily schedule of the student. Each student rated herself according to Dr. Wood's health schedule. An improvement record was to be taken at the end of the year and the percentage of gain for each class recorded. A bronze tablet is, at the end of the year, to be presented to the class making the most improvement. One of the chief improvements was a very marked increase in attendance at breakfast. The interest in weight was also very noticeable, particularly by those who were overweight.

The examination period was made very much less hectic and more normal by the institution of a mid-morning luncheon of crackers and cocoa, or fruit and cocoa, also by offering an opportunity to listen to some very interesting music or reading

for a half-hour immediately after dinner. Rooms were set aside for those who had the "night-hawk" habit of study after library hours were over, so that their roommates wishing to sleep need not be kept awake. These special rooms were not so well patronized as we had feared they might be.

Miss Myrtle L. Barger, Health Educator, Philadelphia Interstate Dairy Council, Philadelphia, Pennsylvania:

I should like to ask whether in any of the normal schools the physical condition of the student, or the way in which she has conducted her health work during her practice in teaching, is included in her ranking as a teacher.

Dr. Holmes:

May I answer that for Pennsylvania? The full effect of the teaching in health education is not as yet recognized as a part of the graduate requirement. However, the state is working toward that very rapidly. It may be that one or two principals are going to require it this year. Other than that, it is the written examination that is counted in health education lines, and the State Department of Public Instruction, and some of the normal schools, are trying very hard to have this eliminated and have at least one-half of the credit given on the efforts the student has made to bring his health up to what we now think is a par basis, during his stay in the normal school.

Mrs. Selbert:

Diploma dependent on health education course

No person can receive a diploma from the College of Medicine in the Ohio State University without having taken a health education course, and no one can get a diploma without correcting those detectable defects discovered on entrance to the state university, so their activities in hygiene itself determine their rank in hygiene. The physical examinations are repeated every year. The initial examination is made upon entrance to the university, and yearly thereafter. The student has an examination to determine whether or not she has improved in her health status.

Mrs. Ernest R. Grant, Chairman, Advisory Committee of Tuberculosis Secretaries on Child Health Education of the National Tuberculosis Association. Roosevelt Hotel, Washington, D.C.:

In our state the teacher does not receive her appointment until all defects have been corrected that may have been found upon her entrance in the school, as shown in an examination which occurs at the close of the normal training course.

Miss Lorraine E. Wooster, Topeka, Kansas:

I would like to know if there is any record as to the states that compel a health report before state certificates or life diplomas are granted. I know a great many do. In our state an application for state certificate must report the habits of the teacher and the health condition.

Health certificate necessary for graduation

Miss Barker:

That is probably true in many of the states. Oklahoma is laboring for it. If teachers understood that they could not make a contract for teaching in many of our cities and states unless they themselves were examples of health, they would be more careful regarding their physical fitness when they enter these teacher training schools.

I would like to know if this organization has any record of the states and cities that require a health certificate before a contract can be signed.

Miss Lucy Oppen, Staff Associate, Division of Health Education, American Child Health Association:

I do not know of any such survey that has been made. Perhaps some of you in the audience have more recent information on that point than I have, but I feel that that is one of the points on which we do need research work.

Miss Wooster:

I asked the United States Commissioner of Education some three or four years ago to get a record. A great many statistics were collected and compiled, but up to this time I have not seen the printed report. It is very essential that we do have some such report.

Miss Erna E. Proctor, Director, Health Education, Child Health Demonstration, Athens, Georgia:

I would like to say with reference to that question of a state law, that Georgia has a law that requires all teachers to have an examination. But the trouble is that we have no standard as to the examination. We have a little farther to go to get the standards for a satisfactory and constructive health examination procedure.

Summary of Section II, Topic 1

THE HEALTH OF THE TEACHER

THE first consideration in any well-rounded plan of teacher training should be the development of the personal health of the student teacher, that the greatest profit be made of the training offered and that the highest possible proficiency be maintained in succeeding years of teaching.

1. Health Examination, the First Step
   - *a. Medical.* A careful examination should be made by an adequate staff under the direction of a physician in accordance with the best current procedures.
   - *b. Personality.* Since health involves adjustment of life on both the personality side and the physical, it is best that both of these fields be included.

Use of Examination Findings

The findings of the health examination should be used as a basis for the classification of the student and the adjustment of his program according to his physical and personality needs. In practice many problems causing a mental bias in the students' minds are straightened out and a number of abnormalities successfully treated before graduation.

Eye defects stand out prominently in the findings and the very large percentage with very poor teeth is most surprising. Underweight calls for study of many students.

Removal of Handicaps Disclosed by Examination

To attain this goal, students may be grouped into three classes:

Group A. Those with handicaps the removal of which depends chiefly upon the effort of the individual and the element of time. This group calls for individual conferences and hygiene courses containing subject-matter selected to meet the needs made evident by the examination findings, such as knowledge of foods and nutrition, the value of exercise and sleep.

Group B. Those with handicaps the removal of which requires medical care or the care of the dentist. The problems of financial difficulties and the need of follow-up work call for recognition here.

Group C. Those with handicaps the removal of which involves the cooperation of various departments of the school. Many departments are concerned here including the Physical Education Department, the Nutrition Department, Dining-room Management, Dormitory Management, the Committee on Daily Schedules and the Committee on Extra-Curricular Activities. This leads to a consideration of the living conditions of student teachers.

2. Living Conditions Affecting Health

Factors for Special Consideration

Those who have studied this subject feel that special consideration is due the following factors: nutrition, physical activity, rest and sleep. Physical activity and nutrition are the most often neglected because of the student load. Even though it may lengthen the necessary time of training, adjustment must be made to provide for adequate rest and recreation, including physical activity.

The Student Load

A survey of the load carried by the student is a most valuable guide in conserving the health of prospective teachers. Adjustment can then be made in heaviness of academic program, balance of subjects studied, extra-curricular school activities, etc., according to the physical status (vigor, handicaps to be overcome) of the student and such conditions as having to work for room and board.

Physical Environment

The physical enrivonment of the student body has in the past been considered relatively unimportant but in the light of present day knowledge is recognized as having a decided influence upon the efficiency of the individual and that in fact, it conditions his health development.

Uncrowded dormitories, adequate sleeping quarters, recreation means, diningroom and lunchroom space and bathing and toilet facilities, lighting (daylight as well as artificial), conservation of energy involved in stair climbing, heating, and adequate study facilities must be considered. It is recommended that building standards be modified and improved to fulfill the hygienic requirements indicated above.

So important is the health of the teacher in training that it is further recommended that the grading of teacher-training institutions should depend not only upon every fulfillment of their scholastic requirements but also upon:

Physical environment standards.
Standards for health examination and follow-up.
Student health as evidenced by an improvement in the standard of student health or living.

Suggestions were made for possible improvement of living conditions by educating the community to such needs in presenting the matter for discussion at men's clubs, mothers' meetings, parent-teacher associations and also in gaining the interest of the governors.

As in previous conferences, the question of whether a teacher should be allowed to graduate or sign a teaching contract without a health certificate was discussed but nothing new was reported. The status of personal health and health practices of teachers in service was not discussed in the limited time of the Conference.

For studies advised to give further information see Recommendations, Section on Teacher Training, Nos. 1 and 2 under Constructive Study, and Nos. 2, 3, 4, 8 under Investigation.

Topic 2: HEALTH EDUCATION SUBJECT-MATTER (UNDERGRADUATES AND TEACHERS IN SERVICE)

Chairman: Mr. John W. Shepherd

Chairman:

THE session this afternoon will discuss what we might call the minimum essentials, some of the things that we expect in child health from different lines of work—nutrition, mental hygiene, physiology, etc. Miss Lerrigo will open the discussion.

Miss Marion O. Lerrigo, Research Assistant in Health Education, Teachers College, Columbia University, New York:

Results of health knowledge test

I am going to describe to you briefly the results of a health knowledge test, to ascertain the present knowledge of the subject-matter possessed by teachers in training. You will find this more fully described in the June number of the Teachers College Record.

The test was prepared by Miss Ruth Strang and Professor Arthur I. Gates and was given to three groups of students in Teachers College, Columbia University—a group of major students in household arts, a group in health education, and a group of major students in physical education and hygiene. I am going to describe the results of giving this test to the three groups of teachers in training.

First, I will give very briefly the manner in which the test was conducted. It was based upon a careful analysis of facts about healthful living. These facts were taken from twenty selected courses in health offered in rural and city schools, and in fourteen of the most widely used textbooks on health.

The topics found to receive most emphasis were listed, and upon each topic a set of test questions was constructed. The statements varied in frequency from "Chew food thoroughly," which was found in all of the texts and courses a total of twenty-two times, to a statement such as "Tea is harmful" which occurred but once in one book. The facts upon which the test was based were those occurring three or more times, together with a few others believed by experts to be important.

There were in all between five hundred and six hundred test exercises. These exercises were then approved by a group of experts.

In order to find out the amount of health knowledge which was possessed by these groups of teachers in training, the most difficult questions from this Gates-Strang Health Knowledge Test, which had been prepared for elementary school pupils, were administered to the three groups of teachers in training.

Lack of uniformity in health knowledge

Because health education is such a new problem, you will find scarcely any uniformity in the amount or the kind of preparation which students have had, so in planning the course for a teacher, a student teacher, either in selecting health group courses in advance, or in planning this matter of one course, it is essential in the beginning of the year to find out what students know.

These three groups of students in Teachers College, Columbia University—(1) majors in health group, (2) majors in physical education, and (3) majors in household arts—were given the tests separately, scored and compared.

There were eighteen major topics included in the test. The subject-matter topics were the usual ones, such as disease prevention, food, breathing, air, exercise and posture, industrial hygiene, names of books and scientists, care of the teeth, eyes, ears, nose and throat, value of health, rest and sleep, cleanliness, etc.

It was found that there were certain topics on which the students were less well informed than others. Those in which the average scores for all these three groups combined were less than 70 per cent, were those about sleep, about physiology, about care of the eyes, and about foods.

Those topics on which they were better informed, in which the average scores for all the three groups combined were about 90 per cent were disposal of garbage waste, school hygiene, the hurtful qualities of shoes, physical education, patent medicine, drugs and alcohol, and clothing.

There does not seem to be any particular logic in that distribution of knowledge but it was the result of the different kinds of training that those teachers had had.

I think you would be interested in what were some of the

questions that the different groups specifically were well informed on, and the questions that they knew very little about.

High and low scores in health knowledge test

Under disease prevention, on facts such as some kinds of mosquitoes carry the germs that cause yellow fever and malaria, all the groups made 100 per cent; on some of the more difficult facts such as that pneumonia is directly caused by bacteria the average score was only about 60 per cent. There was a large group of students that did not realize that pneumonia is an infectious disease caused by bacteria. Ninety-six per cent knew that vaccination for smallpox and diphtheria were good preventive measures against those diseases.

On facts relating to food, 94 or 95 per cent knew that milk was the best food for a family as compared with sugar, molasses, meat or fish, and they knew that more money should be spent on milk than for the other foods. One hundred per cent of them knew that the calorie is the measure of the fuel value of food. On rather technical questions, such as the number of calories in a slice of bread or the relative lime content of cheese as compared to butter, meat, cream of wheat or candy, a very low score was made, also a very low score was made on the number of calories desirable in a lunch for a boy thirteen years of age.

In relation to breathing, air and exercise, a high score in general was made on the value of sunlight and the value of outdoor living. A very low score was made upon the qualities of air in a well ventilated room. People still seem to have a great respect for the theory that the amount of carbon dioxide present makes for a well or poorly ventilated room, and the fact that good ventilation is dependent upon moisture minimum and temperature, has not as yet made much headway.

This group stood well in school hygiene. Most of them had had a school hygiene course, so they made high scores there.

In physiology low scores were made upon respiration—that is, the number of respirations per minute; and rather high scores were made upon the anatomy of the circulatory system.

In comparing the median scores of the three groups I want to give you just a brief summary. The mean of the scores for majors in health education was 87.7 per cent, for the majors in teaching physical education and hygiene 87 per cent, in home economics or household arts 90.4 per cent; so you will see that

on the whole the scores were a good average score, until you consider that these tests were constructed for the elementary schools. The range of scores was from sixty-seven up to one hundred, the usual range.

Chairman:

There is a bulletin published by the United States Bureau of Education, on the subject of "What every teacher should know about the physical condition of her pupils."

We are fortunate to have with us the author, Dr. J. F. Rogers, who will discuss foundations for health training.

Dr. J. F. Rogers, Chief, Division of Physical Education and School Hygiene, United States Bureau of Education, Department of the Interior, Washington, D.C.:

Preparation for health work is admitted theoretically to be the most important feature of teacher training, for it is generally agreed that health is the most desirable asset in the life of the school child, and it is also pretty generally agreed that school health work centers in the regular teacher.

Two essentials for success in health work

There are two essentials for success in all health work, whether of self or for others; one is the ambition to be and do the best work of which one is capable, and the other is knowledge of the bodily machine and of when it is in condition for doing this best work. One must "hitch one's wagon to a star," but no matter what star one hitches to, getting anywhere will depend altogether on the kind and condition of the wagon in which, willy-nilly, one has to travel. Even Emerson was wise enough not to follow too strenuously the advice of Thoreau, of gardening for health, for he found that when the material vegetables and flowers flourished most, the spiritual crop withered. In other words, he was exhausting his fund of nervous energy with too much muscular exercise. He expressed his envy of the great physique and tireless energies of Goethe and Napoleon and Humboldt and Scott, but he had the good sense not to imitate them.

I get rather weary of having Roosevelt held up before school children as apparently the perfect and only pattern in hygiene.

Emerson would be a much better model for most people in every sense of the word. The kingdom of health cometh not by force, and there is more need of virtuosity than of strenuosity in this art of being at our best.

I shall leave to my betters the problem of arousing in the young novice the ambition to be the best possible teacher, and to make the most of the pupils in her charge, and shall spend a few minutes over her training in the very material, very definite and very fundamental business of knowing when her pupils are bodily at their best, and of keeping them in such condition that they may accomplish their best under her direction.

Knowing bodily condition of pupils fundamental

May I illustrate by saying that the teacher in training is in the same situation as a student of music. She is, or should be, taught how to play most effectively upon the instruments (the children) under her charge. It should be her ambition, and must be her ambition, if she is to be the best teacher, to get the fullest and purest tones from these instruments, but this is possible only if they are at their best, just as it is only possible to get the finest music from a violin that is most perfectly constructed, well-strung and finely adjusted.

Hitherto, the instruments put into the hands of the teacher have been considered as good as need be, at any rate their condition was not supposed to matter so far as the music which could be produced from them was concerned. This is the traditional pedagogical way of looking at things, weighted with the inertia of centuries of ascetic habit of mind which we are trying hard to shake off through such meetings as this.

As a matter of fact a cursory examination shows that the material which went into the making of most of these instruments was, at some time, faulty, for the varnish is already cracked in the great majority of them, the lines of the body are frequently bad, the parts are often imperfect, while the strings are very frequently out of tune from day to day.

The training of students of the art of music which did not begin with careful instruction in a knowledge of their instrument and its weaknesses, and a perception of when it is in or out of tune would be absurd and the training of students in the fine art of teaching which does not begin with instruction in a

similar knowledge of the instruments placed in their hands is equally absurd.

The training of the teacher along these lines is simple and easy. How it is to be done is already sketched more or less imperfectly in the bulletin of the United States Bureau of Education entitled "What every teacher should know about the physical condition of her pupils."

Material at hand for study

For some studies, we have to search far and wide for material. In the study of physical characteristics and conditions, we have the material ready at hand in abundance, in the teachers themselves and in the children of the schools. Tradition cries out that there is no time for such studies, but the principal of the training school who has grasped the importance of the situation will give this subject first place on the schedule, and with no limit of time until its mastery.

As a matter of fact, if properly presented, the hours devoted to this subject need not be many for the young teacher to acquire all the technical knowledge needed and a remarkable acuteness in power of observation. Two periods a week for a term will give a good foundation and a few minutes a day or one period a week for the rest of the year will make her fairly adept in the business.

It is not in the least in the nature of drudgery but, on the contrary, rather fascinating work. There is nothing so marvelous and varied as the human body and nothing more keen than the eye of a young woman who is interested in what she is observing. She will know at a glance all the infinitely complicated anatomy of a neighbor's hat or gown, and also the physiology of these objects when they have any, and it only needs the switching of this fine faculty upon something of more intrinsic merit. The teacher that can't tell when a tooth is decayed, that cannot see that a child focuses only one eye upon her or who cannot use a thermometer, is dull indeed and not sufficiently intelligent for the business of teaching.

The class teaching should not, like most class teaching, be divorced from its object, and after the first preliminary lectures, the class members and the school children should be made use of for demonstration and study. For example, after a talk on growth and on the general signs of ill health, a few average

children can be introduced one at a time and the class asked to tell whether they show signs of strength or weakness, of alertness or dullness, whether there is a clear or muddy complexion, a good or poor posture, a normal or a limping gait. There is no lack of human interest in such an exercise.

After presenting with pictures and blackboard drawings the essential facts of the anatomy and physiology of the eye, it is an excellent method to take the class in sections of six or seven and seat one of them in front of the rest for a model. If there is any lack of interest, it is dispelled when the question "Do you observe anything unusual about this pupil?" is followed by "Why, don't you see her left eye is considerably higher than her right?" It is a delight to find asymmetry in the features of your neighbor especially if she is good looking, and it does her no harm even if she considers herself handsome. It is explained, of course, that such common imperfections which pass unobserved are of no particular consequence, but the powers of observation are sharpened and one can proceed to more important matters—the observation of whether both eyes focus upon an object, the condition of the lids as tell-tale of serious visual defects, the conjunctiva and its diseases, the sclera and its color, the cornea and its possible scars, the iris and its movements. These are all here, both normal and abnormal, for observation. Each pupil is observed by the rest in turn and after this one lesson a considerable working knowledge of the normal is already acquired.

Snellen test card

As emphasized in the bulletin already mentioned, the use of the Snellen test card should be resorted to last in the testing of vision. Its use requires considerable knowledge and skill but every teacher can observe whether a child holds her book too close, cannot see work on the board, has inflamed or crusted lids, and whether she complains of headache, drowsiness, blurred vision, or makes frequent mistakes in letters or figures. The Snellen card is especially useful in pointing out to teachers in training that children do make strange mistakes in reading the letters or figures and that mistakes in reading letters or figures in books or on blackboards are due to identical causes.

This study of the physical traits of the child leads to a humane, economic and pedagogic interest in the removal of any

remedial handicaps—to the placing of the instrument on which the teacher plays in good repair. But it does not end in the medical treatment of the child. It is the basis for health habit teaching which is the business of putting and keeping the instrument in tune from day to day; and it is only by knowing the child at his best that the teacher can know when he falls from that best, through bad habits or from infection. The study of the child's physical traits leads also to the study of family traits and family habits, and to a closer bond of sympathy between parent and teacher without which health habit teaching will probably come to naught. Contrary to appearances, the parent is really vastly more interested in the health of his child than in anything else.

Family traits and family habits

It goes without saying that all this study and aid to the physique and health of the child means better school work, less wear and tear on the teacher and smaller outlay in public funds for educational purposes.

There is another side to this subject. The training of teachers in this fundamental feature of education prepares them also for a fundamental feature of parenthood which a large percentage of them will assume within a few years after leaving the training school. They will not only know the physical condition of the children of others, but what is even more to the point, they will be prepared to know the physical condition of children of their own rearing. Their knowledge of pedagogy and of methods of presenting reading and arithmetic will be of slight use but the knowledge of child welfare will not be lost.

Chairman:

Dr. Blunt will make some statements concerning the American Home Economics Association in relation to this field.

Dr. Katharine Blunt, Chairman, Department of Home Economics and Professor of Nutrition, University of Chicago, and President of the American Home Economics Association:

Of course, this group knows of the interest and participation of the American Home Economics Association in health education.

At our annual meeting, last summer, we appointed a com-

mittee called the "Committee on the Part of Home Economics in the Health Education Program." This committee is made up from professional people, from secondary school teachers, teachers in our colleges and universities and normal schools, from extension workers and nutrition workers of various kinds the country over.

I thought it might be appropriate to describe the work one part of that committee, the teacher-training division, is undertaking to do this year. Miss Martha Koehne, formerly assistant professor of health education, University of Washington, Seattle, Washington, the chairman of that committee, has sent out a questionnaire to many of the normal schools and universities and colleges in the country, to find out what courses in health education or health are being given. Her returns are not yet in, all of them, but her questionnaire points the information desired through such questions as: "Is there a general course in health? Is it required of all students, and if not required of all students, who takes it, men or women, or both, a large number or a small number? Besides a general course of health, are there courses in training of health workers? Are there courses in nutrition, and for whom are these courses offered or required, or to whom are they given? In what department are these courses given, in the Physical Education Department, in the Home Economics Department, in the Hygiene Department, or what?"

This material will be collected and presented, at least in tentative form, at the meeting of the American Home Economics Association in San Francisco in 1925.

Chairman:

May we hear from Miss Roberts on Minimum Essentials in Nutrition?

Miss Lydia J. Roberts, Assistant Professor of Home Economics, University of Chicago:

Chicago, Illinois

Before I attempt to say just what is the bare minimum of nutrition knowledge with which a teacher could get along, I should like first to state what might be termed the ideal minimum. In our university—and the same is true of other univer-

Elementary course in nutrition

sities and colleges—we are giving an elementary course in nutrition, which represents our ideal of what every person ought to know about nutrition. Until a few years ago our nutrition courses were open only to students majoring in the subject who had come up through a long series of prerequisite courses in chemistry, physiology, bacteriology, and food preparation. This ruled out the mass of educational people. A few years ago we tried the experiment of seeing how much nutrition we could give a group of intelligent people who had no knowledge of the subject. We therefore organized a course which we found so successful that we now have it every quarter, a course not specifically for teachers—though we like particularly to have teachers in it—but for all those who want to know something about the subject of nutrition and are not able to take all the prerequisites of the more advanced courses.

This course covers the same field as our more advanced one, but it is expressed in much more simple language. The technical terms are omitted and facts are presented just as simply and clearly as possible. Practical applications are made so that the students know the fundamental requirements of an adequate diet, first for adults and then for children of various ages—infancy, pre-school, and children of school age.

Perhaps the most important result is that the students become convinced of the tremendous importance of diet in relation to health. We have, however, been agreeably surprised at the amount of fundamental knowledge of nutrition that can be given such a group of people in just one major course. I should, in fact, be willing to trust any teacher who has done good work in such a course to handle the nutrition teaching successfully in her own room. She will come up against some problems which she cannot solve, of course, but she will know her own limitations and also where to go for further help. The content of such a course, therefore, is what I wish every teacher might be able to have.

In case even this is impossible there are a few things which every teacher should surely know. She should, first of all, have a firm conviction of the importance of nutrition in the health program and in the life of the child. She should know the importance of milk, of fruit, and of vegetables in the diet, and as

much as possible about the "why" of each. She should know that the thing to emphasize is what to put into the diet, rather than what to omit. People with little training are prone to make a bugbear of coffee, pancakes, fried foods, and similar matters, instead of centering the attention largely upon what the child should eat. Almost the only "don't" I personally find it necessary to stress is, "Don't eat sweets between meals," for the reason that without this regulation it is almost impossible to have the milk, vegetables, and other simple wholesome foods included. I do not think it is essential that a teacher should know about calories. In addition to knowing the essential foods, she should know the necessity of regular meals at appropriate distances apart, and above all the importance of every child eating breakfast before coming to school in the morning.

She must know also the necessity of long and regular hours of sleep, and the amount desirable for children of the age with which she has to deal; for without adequate sleep and rest all her nutrition teaching will be of little avail.

To summarize, it is desirable that a teacher should have at least the knowledge of nutrition covered in such a course as outlined; but if she cannot have even that she can do a tremendous amount of good in her own room if she has at least the few requirements listed. She can, as Dr. Bobbitt expressed it yesterday, create an "atmosphere of health" in her own room and thus contribute her part toward more wholesome living and better nutrition on the part of her children.

Miss Ada M. Field, Associate Professor, Department of Home Economics, George Peabody College, Nashville, Tennessee:

I have been giving about twenty-two hours at Peabody and I think I agree that thirty seems to be about right for the minimum essential. I am also interested in knowing if somebody else is giving such a course, and about the length of time they have found to be necessary.

Nashville, Tennessee and East Lansing, Michigan

Miss Ruth M. Cowan, Assistant Professor of Home Economics, Michigan State College, East Lansing, Michigan:

We give one-third of that. We think that every teacher should have a working knowledge of the subject of nutrition.

In one semester we give three hours to health and hygiene and one-third is all we can give to nutrition.

In connection with teaching health and hygiene I want to speak of physiology. You could not teach mathematics if you knew nothing about mathematics, and you cannot teach health and hygiene unless you have the basic knowledge of physiology and a minimum amount of the essential principles of hygiene. You must have knowledge of the construction of the body, how it functions, and what it is to do.

Miss Ava B. Milam, Dean of Home Economics, Oregon State College, Corvallis, Oregon:

In our normal school we have only a two-year course, and there is a great deal of time given to practical teaching which we want to keep up. We do not have much time for physiology, bacteriology, etc. We have one year of bacteriology and then one-half year of that which we call health teaching. At this time it is necessary to give them their background in hygiene and physiology and the method of health instruction, and I am wondering if other people are up against the same problem.

Chairman:

Mrs. Paul who recently spent two years in Brazil organizing the school systems there under the Minister of Agriculture of Brazil is here, and we will ask her to talk to us about physiology in relation to this health program.

Mrs. Lucy M. Paul, formerly Instructor in Hygiene, Bacteriology and Physiology, Pratt Institute, Brooklyn, New York:

Physiology course at Pratt Institute

At Pratt Institute I had charge of the physiology, bacteriology and hygiene courses, which was an ideal combination. We combined our work also with the physical training department, so I knew the physical condition of the girls from the cards handed over to me, and on that basis I began my physiology work.

Practically all my pupils on entering knew some biology, and that was my starting point. I gave them a few preliminary lessons in biology, myself, and then I gave them for about three

months, a good stiff course on the digestive system. We began with the raw material, taking it through the alimentary canal, the circulation, and through the respiratory system, the excretory organs, and so forth, until we had completed the study on this particular subject. It seemed natural to begin with the raw material, as foods; at the same time the other teachers were cooperating, in that they were taking up the subject of carbohydrates in the cooking department and carbohydrates in the chemistry department. In fact some of the girls said at the end of the first month at Pratt, that all they did here was carbohydrates. Such correlation made it very easy for me to emphasize the points in physiology, referring back to their chemical knowledge and to what they were getting in cookery.

Correlation: physiology, cooking, chemistry

We felt that the course was a working course in that we checked with the physical training department. When the girls did have trouble with their health we tried to find out just why they did and we emphasized the point that if our girls would not put their physiology into practice at Pratt, we did not care to have them continue there.

The next year I went into bacteriology with this basis in physiology, and emphasized how bacteria get into the body, what they do, their effect, and so on; then in the third year we finished with a good stiff course in hygiene. In hygiene I could draw the strings together into one connected course. We had already had little odds and ends from the physiology and hygiene courses that could be brought over into the bacteriological courses, and in the meantime they had gone along similarly in chemistry and nutrition.

The teachers met occasionally and talked over the defects of the courses and where we could eliminate repetition. I wonder sometimes if there is not too much repetition, unless there is close correlation between courses with similar fields. Somebody should be responsible for drawing all these things together in a systematic way.

Chairman:

At this time I will ask Miss Bouvé if she will be kind enough to tell us what she considers the minimum essentials in physical education in a course in health education for children.

Miss Marjorie Bouvé, Director, the Bouvé School, Boston, Massachusetts:

We find that teachers going out in physical education must have a certain amount of working nutrition. We find that they have not been having enough health work, so that now the course is being lengthened to three years.

I now think we must have at least thirty hours of nutrition, and at least thirty hours of personal hygiene, with probably two hours of methods in health education. I feel very strongly that personal hygiene should also be combined with the social hygiene, that there should be no break as a teacher goes from one into the other.

Now in addition to this in our school of physical education, we have three hours of physical health in the senior year, taking in some public health work. We also have an hour in the senior year in symptomotology, which means a total of thirty hours, but I think the average teacher probably would not need as much as that.

Chairman:

In this question of minimum essentials, what are the things least in quantity that ought to go into the experience of people who are training to be teachers as well as those who are teaching, in order that they may qualify to supervise and suggest and help children to be healthy. That means more than just the suggestions we have named. We have spoken of mental hygiene. We have spoken of bacteriology, then there is physiology, physical education, and so on.

Miss Pritchett:

Thorough scientific background for health teacher

We can strengthen our teachers both in service and in training by helping them with subject-matter. A worker in health education should have a very splendid scientific background.

We want to give our teachers in the colleges and in the normal schools that type of material, as a science, not as a health course, I think. I may be wrong about that, but the teachers that have come out of our schools who do the most

efficient work are those that have developed it from chemistry, from biology, from all the natural sciences, and then have had a summary of all those subjects in one course.

I believe that we supervisors are not sufficiently trained to go out and help the teachers in service do their work. We give teachers a little bit of information and they use it to the very best of their ability. Some of them have very splendid ability to use it, but sometimes they are not correctly grounded.

May I tell a story that happened the other day? I had started a propaganda of feeding the very poor children—to say nothing of the children of the wealthy—on tomato juice rather than all orange, and before doing so I talked with Dr. Haynes of New York, and Dr. McCollum and Dr. Mary Swartz Rose. They gave me my information, and then I worked with it myself. I found the children seemed to thrive and everything was all right. But some very splendid supervisor told one of my teachers, "You know, the use of tomato juice was a substitute for orange juice during the war; we don't use it any longer."

Too little or inaccurate information

It would help our teachers too, I feel, if we could have an experiment conducted by a teacher who has health ideals, who has health enthusiasm, who is a live wire on the subject of health teaching and who would work with a class of children having a committee of psychologists, of doctors, of nurses and educators advising her and directing her. Let her with this little group of advisors work out the problems of health education, based on what is happening in her classroom.

We want more health education built around the everyday happenings, that come into the everyday life of the children. From a combination of such a rather small group of intensely trained people advising a good classroom teacher, I believe we would get some methods and some ways of approaching health problems that would help all teachers. Most teachers are very uneasy about the way they are presenting the subject.

Chairman:

Dr. Vincent will speak next.

Dr. Stella B. Vincent, Department of Psychology, Chicago Normal College, Chicago, Illinois:

Some years ago in our school we began a new program. Some of you may have heard of it. We started out by discarding everything we had and setting up some of the fundamental essentials for life. The first of these, of course, was health. And when we asked what the different departments could contribute toward that scheme, the Department of Psychology responded —much to the dismay of some of the other members of the faculty, because they could not see what psychology had to do with that.

Psychology's contribution

However, we outlined our position, and when some of these ideas were put into effect, psychology was put on the map. For the first time we had a course in mental hygiene in our school. More than that, I think some of the other courses were considerably changed by the discussion. This discussion lasted well into the second year.

To use a familiar illustration, although we may know all the facts of nutrition, if we can't persuade a child to eat what is good, what is the use of the knowledge?

I think a large part of the results of health committee work are due to psychological reasons, and some of that psychology comes into every part of the health scheme.

For instance, taking our underweight girls, sometimes thirty pounds underweight, we do quite as much for them in the Department of Psychology as they do in the Department of Nutrition. I frequently find that I can persuade girls on coming into the mental hygiene class to take on weight when the nutrition people can't. The whole psychology of habit is concerned. We are all a bundle of habits, and we need to know how those habits grow up. We need to know when they can be influenced and modified.

Our mental hygiene course as it is now conducted, is a thirty-hour course. The course is given as nearly as can be with specific reference to students. While we cover certain general topics which are outlined, yet the application is always to the individual or the individuals of the class, certainly to individuals of whom they have knowledge or may have knowledge. The references are not alone to the students themselves, but also to

children. In the latter part of the course we come to complexes and things of that sort. The girls usually say they wish they might have had this course before going out to practice but unfortunately it cannot be given until after they come back. They say they get more help and discipline in this course in mental hygiene than in any other course.

I think that is probably true. We attempt to get to the individual girl in several ways. We inspect frequently the health records to which we have access. We get some other records from them and they fill in some questionnaires for us, which give us some clew as to their own individuality.

In previous years girls have had diaries which they kept for the course of a month, in which they recorded all the happenings of the day. They kept them for thirty days, every half-hour of the day. I ask students not alone to do this, but also to give their emotional reactions to the things which they do; do they like it or not, and why? At the end of each day they give me a health record, an emotional record, and they estimate their own efficiency for the day, counting their highest efficiency as one hundred per cent.

I hold no brief that these diaries are all accurate; they are given under the seal of secrecy, nobody has ever seen one of them excepting myself, and I do not talk about them in any way that they could object to but I do get side-lights on the individual girl which other means have never given me.

Side lights through diaries

Moreover, to go back to the health record, I have tabulated a great deal of data that has not been published. We have four quarters in our year and so at different periods of time over different sections of the year, I could list for you all the illnesses. I could show how they affect the school attendance.

One point in which I was particularly interested was the mental process during the menstrual periods, and I have a great deal of data on that (as I have a thousand cases over a period of several years) and the relation of the other illnesses to that period. I haven't had the leisure nor sufficient help to get the material in shape but I hope some day I may.

Mental hygiene can bring much help to the health movement. We do not teach mental hygiene as it is taught in many colleges. In our school it is taught from the positive, constructive

side. We do not go into the abnormal at all, except as we have to do in cases of illustration to emphasize the normal. That it can be taught at all is something of a surprise, I think, to a good many in recent years. I have always used library references for reading, so far, and then the class exercises some of which I mentioned. This year we have tried Morgan's book. It has worked fairly satisfactorily, and this summer I am giving courses for teachers in the city, where we are using as the text Burnham's "The Normal Mind."

Committee to organize course in mental hygiene for normal schools

Dr. Andress reported that in Massachusetts a committee had been appointed to organize a course in mental hygiene for the normal schools. This course was to cover some fifteen general topics. The committee is composed of two normal school heads, two psychologists, one psychiatrist and a person interested in parent education.

Miss Emma Dolfinger, Director, Division of Health Education, American Child Health Association:

There came to my attention not very long ago a very interesting method of making a program for health education in a high school. The significant idea for this meeting is the way in which that project was begun. An effort was made to find out as a basis for curriculum planning from a great many different sources, what health in high school girls would connote.

Do we really know what health knowledge a teacher ought to have? Do any of you know of any studies which have been made to find out what are minimum essentials for a physiology course as based upon these two things, first, an analysis of what teachers know and second, analysis of what the teachers are going to be required to transmit to children in the way of practices and subject-matter? Miss Lerrigo a little while ago suggested to us that a study be made to find out what was the sum of physiological facts possessed by teachers. Should we not know, in the first place, how much health knowledge people have when they reach the normal school? Should we not also know quite specifically what subject-matter in physiology and biology and psychology they ought to possess in order to do intelligent habit training, in order to do intelligent physical education, in order to do intelligent food direction?

Some place or other, perhaps in a teachers' college where there are excellent facilities for doing research, perhaps in a university, perhaps in an excellent private institution organized to discover those things, we ought to make an effort to find out minimum essentials by objective and experimental methods. I don't think the way to do it is to decide what minimum essentials are by deduction from textbooks. An effort should be made to discover in some objective way what are the teacher's needs in the first place, and then what is the subject-matter for these needs.

Research work on minimum essentials

There are plenty of normal schools in the country where in a given brief time a teacher has to secure professional training and educational subject-matter simultaneously. There are a great many different ways of handling such courses, but the less time you have at your disposal the more important it is that the facts included in the course are, in the first place, those facts which are indispensable to the first application the teacher will have to make when she goes out to teach; and in the second place, those which will give a sound basis that can be used as a foundation for a more extended professional course.

For summary of Topic 2, see p. 148.

Topic 3: ORGANIZATION OF HEALTH EDUCATION SUBJECT-MATTER FOR THE TEACHER IN TRAINING

Chairman: Miss Emma Dolfinger

Chairman:

DR. WOOD will give us a basis for discussion by outlining the program of service of the teacher in rural or city elementary schools.

Dr. Thomas D. Wood, Professor of Physical Education and Advisor in Health Education, Teachers College, Columbia University, New York:

The topic for discussion here is the organization of health education subject-matter for teachers in training. The first question is the organization of courses up to the present. It is

impossible to speak confidently and accurately in relation to that question because nobody knows exactly the usual organization of courses. The following suggestions represent in part, conviction regarding the desirable undergraduate program for the teacher of health education, as well as impressions of practice today.

This program of training is increasingly being based upon the need of preparation for an actual service program. Those who plan the preparation of the teacher through undergraduate courses will do the most helpful work in the field of health education, by visualizing as definitely as possible the program of actual service and teaching, which this person will do in a rural school or in an elementary school. This is submitted to you as a desirable basis on which to arrange a teacher-training program.

Health service program for rural and elementary teachers

What is the service program for which the teacher in the rural school and the elementary school ought to be trained? First, there is the health supervision, including the daily inspection which the classroom teacher is, in a rapidly increasing number of cases, doing and being trained to do. There is then the health examination, the part of this that the teacher may do, and will do, I think, more frequently, including the testing of sight and hearing, at least the fundamental preliminary examination with reference to the condition of eyes and ears, monthly weighing and measuring, and assisting in the preliminary annual screening for the health examination through the observation of posture, of conditions of the skin, of nutrition (in addition to weighing), inspection of throat, nose and tonsils. In Detroit, the grade teachers, with a little training, are making observation of the thyroid to see whether this is enlarged and presents any indication of a health defect.

Again, in the health service program is the specific part the grade teacher ought to do and ought to be trained to do in the control of environment in school sanitation, the cleanliness of the school, the lighting, the ventilation and other factors.

The hygiene of instruction is another phase of health service for which this teacher should be trained. This means a health judgment with reference to suitability of pets, of plants, of pencils, of utensils, of books, in short, of all processes and materials of instruction.

This grade teacher trained in the normal school or in under-

graduate courses, has, in addition, practical responsibility in teaching for the supervision of physical education activities; the direction of the play, the games and all the activities of the children. Physical education in our rural schools and elementary schools will not be taught in a majority of cases by specially trained technicians in physical training. The grade teacher should be trained to do this.

Finally, there is the program of health education, including the guidance of the children with reference to the formation of habits, physical conduct, mental conduct, social conduct, moral conduct; the development of attitudes and helping them to increase their fund of knowledge.

Very briefly, this undergraduate training should include certainly what we call the basic life sciences—biology, something of physics and chemistry—before leaving high school. If the student has not had this training in the high school there ought to be provision for it in undergraduate college courses, or normal school courses. Anatomy, physiology, hygiene, nutrition, must be included. It is very unfortunate that teachers of physical education know so little about nutrition. It is also very unfortunate that teachers of nutrition and home economics who are attempting to deal with health education, know so little about games, play and practical physical education activities. In addition to the fundamental courses in the above sciences, provision should be made for thorough training in psychology and principles of teaching, with their applications to the specific field of health education.

Basic life sciences

Emphasis is here given to the point that these applications must be made definitely for the teachers. The students will not necessarily make an application unless they are led up to it by concrete illustrations and practice.

There should be in every undergraduate course which trains teachers, training in principles, materials and methods of health education. Here we should have the practical application of the laws of learning, of the processes of habit formation, of acquiring of attitudes. The teacher should be helped to fully appreciate that health education, like any other subject, must conform to the general laws of teaching, of psychology and pedagogy.

We have then this general range of subjects, some of them

more fundamental, some of them more definitely and specifically professional, leading up to the actual observation and practice of health education. Before observation or practice, however, the students in undergraduate training should work out programs of teaching even if these are very amateurish. Even if the student has not taught, it is recommended that the curriculum should always be based upon an analysis of a practical situation. If the student has not had any experience in teaching, let him set up a curriculum for the elementary school or high school in which he himself was a pupil. Base every program of instruction upon an actual analysis of a teaching job, of a school status, of a community need, even if you must first send the student out in the field to observe so as to get acquainted with a concrete situation.

These students ought to have their observation under supervision, as well as their practice teaching.

Chairman:

Dr. Wood has given us all a very valuable basis for the rest of the discussion, in the continuance of which we have an unexpected pleasure. We did not know that President Owen of the Chicago Normal College would be with us so soon. Dr. Owen will give us a summary of the way the various factors which Dr. Wood has outlined are being brought together in one program in the Chicago Training College.

Dr. William B. Owen, President, Chicago Normal College, Chicago, Illinois:

Chicago Normal College

There is a difficulty in starting a health program as compared with other courses. Sometimes I think we forget in many of the subjects that we teach how we profit by a tradition that is embodied in all sorts of activities.

There are several things I want to emphasize very briefly about this matter of health education. The most important thing for us to do is to make the "institutional" attack on the training of health fundamental, in contrast to the classroom or "subject" attack on it. If we think of these fundamental sciences that Dr. Wood has spoken of as preliminary content in

that one must have them in order to be intelligent about health instruction—so that we can put the health instruction on top of those preliminary sciences—then you will have just exactly the situation that we are trying to get away from in all the other procedures.

Suggestions for health program

I should like to think of the whole situation in this way. When a student came to the teachers college, the first thing that student would encounter would be an institutional procedure accompanied by instructions that immediately would impress upon him that he was within another world. As if someone should say, "There are a lot of things that you haven't been paying any attention to that you will have to pay attention to whether you want to or not, because the institution does. You cannot live in this institution unless you live this way." Now I know perfectly well that this means external pressure, but it is no greater than that put on people when we place them in classrooms and tell them they have got to pass certain examinations or they won't graduate and if they don't graduate they won't get a place to teach. We are tremendously afraid of pressure when we call it that, but we go on using it all the time just as ruthlessly. I think we ought to use it for what it is worth.

I should like to have the examination that Dr. Wood talks about set up in the school itself. I don't know just how much the college should do about remedial measures and how much the students themselves could do. I know perfectly that we aren't equipped to exert the kind of pressure necessary to get the success we ought to have. We are instructing people, we are calling attention to the necessity, we think we are using all the psychology of suggestion that is possible, but we are not taking the last step by insisting that people do take these remedial measures. We insist that unless a girl can take on a certain minimum of musical training she shall not teach. Why shouldn't we say it and put it into practice that unless she can establish certain standards in the care of her own health in the two years she is with us, she can't go out in the school and teach at all. I don't see why the one isn't as possible as the other, but people are not used to the idea as yet.

This seems to me to be the method of attack in organizing your course. I believe, though I must tell you frankly I don't

know just exactly how to do it, that one can get the motivation for the biology out of the health courses instead of *vice versa*. I should turn it right around. I don't know whether a man ought to study anatomy or not. I don't know whether he ought to study bacteriology or not. But if we begin to study how to keep well, then you might find out how much bacteriology you might teach with motive and leave out the rest. That might be a very wholesome thing for both the student and bacteriology. In our own experiment we take bacteriology in a very simple form to begin with and acquire from the standpoint perhaps of self-protection, the knowledge of the transmission of disease through bacteria. We deal with the culture, something of the method of identification, the effect they have on life both favorable and unfavorable so that our people are intelligent about bacteria. But we could go on a good deal farther with the relation between knowledge of the bacteria and control of health on the basis of the experience and interest that is created from the attack we make.

Then take the case of anatomy. I believe the anatomy taught in a teachers college in connection with health courses ought to be carried as far as it is necessary to make clear the control that anatomical knowledge gives over health. I am not going to tell you how far because I don't know, but I know it goes a good deal farther than I or anybody in my institution thought it did, about two or three years ago.

Health program to precede traditional science

Briefly, what I fear and what I want to see avoided is the mistake of the academic institutions in putting the traditional sciences in the traditional place as preparation. I would turn it right around. I would start with the health program first and then go as far as experience and the interest of the students would carry it. Certainly anatomy, physiology and biology, and I think chemistry and physics, can be introduced that way. Not so much descriptive biology as certain problems of modern biology that have to do very closely with one's own health and that of one's family. I wonder if we have ever sat down and thought out the tremendous force in this present so-called revolt of youth. Have we ever thought what a marvelous opportunity there is in education these days to take that tremendous force and make it intelligent and directive in dealing with the

lives of the young. When we have young people that are already interested in being beautiful, strong and effective, you do not have very much further to go to tell them how. If you don't think that is a motive then you live in a different country than I do. Indeed it is closer to the life of these young people than anything I know.

I am trying to say that whatever correlation is to be got we ought to get by making in the institution where we are going to train the people, an institutional health program so powerful, so well organized, that there can't be any escape. The health program ought not to be a course, but the policy of the institution. It ought to be the first fundamental basis on which the institution is organized. It ought to extend to the care of the building in which students and faculty work and live, and the rooms in which they sleep at home. There ought to be a constant organized check-up from the students as to how they eat and their own diet at home should be evaluated. That is the laboratory in which they can work.

Not a "course" but a "policy"

If you move out from health courses to a health program in the school I think you will begin to find out what kind of correlation is best. To do that it may be necessary to throw aside every academic tradition that rules anywhere in this country and start anew, though you may get back to it again before you get through. The trouble is that we are so afraid some institution won't give us a degree or a credit. Institutions that are a little slow to depart from their academic standards will accept it when we have shown them that we can do this thing and do it successfully. I profoundly believe that though we have tried fifty years to get science into elementary and undergraduate education, we will never get it established there until we get it in the study of one's well-being, the study of food, and the study of life processes.

I have tried to say one thing. I am much more afraid of courses than I am of a program. I think our individual courses in the fundamental sciences ought to grow out of our attempt to show these students how to keep well, fundamentally and always well. This principle would have to do with physical education as well as with the other courses. A part of your control of your health is physical exercise and the joy of playing with

other people. Bring physical education into the school in that way and thus determine what you will do in the schools.

Chairman:

I am sure that President Owen has given us a very important thought to ponder. The practical problem is how the conduct of the school can be so organized as to bring about those ideals.

In relation to the important point that President Owen raised, is it possible for this company to suggest a reorganization of biology materials, psychology, physical education, the subject-matter which refers to public health, etc., in terms of how the material helps the student to the control of his own well-being. If we are to recognize subject-matter in our courses, and we must do so if we are to compress that vast amount of material that a teacher needs within the short compass of the time available in the preliminary training, must not the reorganization be in terms of the control of one's well-being, rather than in terms of logical development of subject-matter as has been the method up to the present day?

The control of one's well being

While the rest of you are considering the question thrown out to you I am going to ask Miss Reynolds to give us a brief picture of the way in which these health courses are organized at the present time in various institutions. Miss Reynolds has been traveling extensively investigating health training in the various normal schools and teachers colleges.

Miss Nora L. Reynolds, Field Secretary, Child Health Education Service, National Tuberculosis Association, New York City:

I have had occasion during the past year to visit normal schools in approximately thirty different states. The purpose of my study was to find out just how much preparation for health teaching was being given to the average normal student in the average normal school in each state. It was not possible to remain long enough in each institution to make a careful analysis of the courses which were offered but just to get information as to the general plan of organization.

In very, very few of the institutions I visited was there a health education department. The course bearing on health

training which seems to be most universally given is physical education and this, in almost all of the teacher-training institutions, is a required course. In addition to the floor work the physical education director usually teaches a certain amount of personal hygiene. This is in some cases a lecture course and the only definite course in health education. In a considerable number of institutions, however, there is in addition, a course usually called hygiene or sometimes health education, also required of all students. In this a definite effort is usually made to suggest methods of teaching health in the classroom. The method for handling this course differs widely in different institutions. Sometimes it is given by the nurse or woman physician in charge of the personal health service for the students; and sometimes it is given by a member of the Science Department. I was particularly impressed by the fact that this course is, in most instances, completely isolated from the other courses given in the institution which have a bearing on health. As I said, those teaching these courses were trying to make the work as practical as possible but they did not seem to be able to draw on materials from other courses in doing this. As an illustration of what I mean, in one particular institution both courses, physical education and hygiene, were required of all students. The hygiene teacher was taking up the different health habits and trying to give the students suggestions of ways of developing them through classroom work and she found it necessary to include a certain amount of instruction in physiology. She was talking about posture and although instruction in physiology bearing on posture was doubtless being given by the physical education teacher, the courses were not so organized that the hygiene teacher could draw on this material for her course.

Survey of normal schools in thirty states

Very little connection seemed to be made between the general science courses and the hygiene or health education course. I have in mind one school, however, in which there was very nearly an ideal arrangement last year from the point of view of Dr. Owen's conception of how health education should be organized. It was a small school and the teacher of the general science course required of all of the normal students, was giving the health education course as well. As she developed the health education work, she had the opportunity of knowing just what

the students needed in the way of a background of science and planned the two courses together. I was sorry to find that this year the president had put the health education course under the Department of Physical Education where the teacher had no idea of what the students were getting in the science course and so was not able to do nearly such effective work.

Such lack of coordination was the case in several institutions. I think I may say those concerned with the work were usually fully aware of this lack but with the rigid organization of the program they didn't seem to be able to do anything about it. I found that situation so common that I am hoping very much that the discussion today will take up what can be done in the way of helping normal schools to bring about a reorganization.

Chairman:

In the Merrill-Palmer School they are doing very interesting work in the way of finding out some fundamental things about the type of things that we need to know in order to provide the environment in which children can best develop. I wonder if Miss Sweeney will briefly outline some of the experiments they are making in the Merrill-Palmer School—experiments which will eventually give teachers some subject-matter most directly related to life.

Miss Mary E. Sweeney, Nutritionist, Merrill-Palmer School, Detroit, Michigan:

Merrill Palmer School

Our children come to us at two years of age. I think you would be deeply interested to know that the children are very much interested in their health, the way they grow, their weight and the color of their cheeks. I have come to the conclusion that a real vanity in women begins promptly at two. We are trying to correlate the physical, the mental and the moral education of children (the character training of children). We are trying to make it essentially an all-round program, we try to find out just when children's habits are formed, what habits are formed, how they are formed, how we can train children physically, mentally and in their moral aspect.

When they come to us they have a thorough physical examination. It is one that gives us everything we can know from laboratory findings, from examinations of every organ of the body, from the child's history and from the family history to form a perfect picture of the child, and the influences physically that made the child what he is at two years. We have the same kind of family history from the Department of Psychology, the same sort of personality study, and we try to find out what the child's mental ability is.

The children begin with taking care of canary birds, goldfish and flowers and doing the ordinary little duties around the home, dusting the tables and putting things in order. Then they serve themselves at the table. It is a great honor to be appointed a waiter. An interesting thing happened not long ago. A mother came to me and said she had a three-year-old who took the silver out of the maid's hand and said, "Look here, let me show you how to set the table." She replaced all the silverware on the table and showed the maid how to serve the family. This will give you an idea of some of the training. We feel manners in life are quite as important as morals. We are trying to study what habits must be formed to make a child capable and able to have health in this modern time.

Connection between home and school

We have a member of the staff who makes the connection between the home and the school. She visits and finds influences in the home that affect the child in the kind of discipline and the kind of environment, and brings the information back to those of us who are dealing with the children. At the same time she takes up the physical findings and psychology investigations and whatever the educational group have to say about that child, in order to help the parent at home better understand whatever success we are having with the child.

Chairman:

Miss Sweeney, I wonder if you feel that the school's investigation concerning teeth has gone far enough for you to tell us about. I think it illustrates an effort to find out something in fact concerning a thing about which we have long theorized. Also it again contributes to the point of how we can get the material that ought to go into the teacher's program.

Miss Sweeney:

Study of mouth defects

It is a pioneer five-year study. The investigator is working in a school in Detroit. We don't know what defects in a child's mouth will right themselves and what ought to receive dental care. Therefore, a study is being made of a model of every child's mouth twice a year, as he comes to the school. There are about sixty children. The study is concerned with all the defects as they appear, with the nutritional history and the disease history and close observation extending over a period of five years. The children that leave the school come back and have models made of their mouths so that we will have a complete five-year history of every child. We are also trying to study what the dimensions of the mouth should be in relation to the general dimensions of the head and the general bone lengths of the body and we are trying to find out what is the effect of prolonged nursing at the bottle, how to discover the various defects that we find and how to correct over-bites and malocclusions of every kind. We are trying to relate all that we know from the voice of that child to the development of the mouth and in that way we hope to make a contribution to what may be expected of the growth and development of the child's mouth between two and five years old.

Dr. Taliaferro Clark, Senior Surgeon, United States Public Health Service, Washington, D.C.:

Dr. Wood has suggested I say something to you about the growth and development of children. For a number of years we have been interested in the growth and development of children from the standpoint of establishing standards of nutrition. One of the important phases of your instruction relates to nutrition, and as we establish some standards by which we can measure the deficiencies of the child, so can we direct our teaching efforts to the best advantage. The growth of babies, for instance, is quite well recognized. Babies having a sound birthright, who are properly started out on an equal footing at the beginning, not subjected to the unusual stresses, or to many varying conditions as children who get older and run about, show growth pretty uniform, quite constant, and easily measured up to one or two years. The average baby weighs a little over seven

pounds at birth, doubles its weight at six months and triples it at one year, then weighing about twenty-one pounds. Between the second and sixth years, the weight should double. But when we get into the older age groups where the factors of heredity become more and more pronounced, and environmental factors affect the child's condition more and more, it is a much more difficult problem. Thanks to the teaching and effort of Dr. Wood, who I feel has done more than any man in the United States to arrive at a satisfactory standard by which to measure the nutrition of the child, this important phase of health education has received remarkable emphasis. Unfortunately, in the beginning of this work and in the wide use of these growth standards, there was too close adherence to general averages.

Growth and development of children

We have analyzed data accumulated for a number of years in order to test the accuracy of existing standards, particularly from the standpoint of height-weight results, and have found increasing variability with increasing age, notably among females. There are many factors that influence the annual rate of growth and the chances are that in communities these several factors will be operative with varying degrees of intensity, and thus militate against the universal application of a single standard. For example, we know from our studies that the rate of growth of children varies at different age periods, and that the rate of growth is not the same for the two sexes at different periods of life, and these variations must be taken into consideration in attempting to measure the nutrition of the child by the percentage deviation from an accepted average.

We find also that if we study children at different age periods, particularly the percentage of distribution according to weight, it is found that the so-called coefficient of variation increases with the age of the child. Particularly is this so in the female. Now if we adopt a uniform percentage deviation from an accepted average, we are confronted with this difficulty, that as this coefficient of deviation is small we will get a curve almost in the shape of an inverted V, and when that coefficient is large we get a flattened out curve, and as we cut off ten or fifteen or twenty of these different curves, we get a decrease in the large number period.

Hereditary factor

In order to reduce the hereditary factor to a common denominator, measurements were made of a large number of children in twenty cities in nineteen different states during the last two years that were restricted to children of American ancestry. By American ancestry is meant children of the third generation born in this country irrespective of race. Another requirement was that the children measured should be free from physical defects. In addition to weighing and measuring the height of these children, certain other physical measurements were obtained for use in an attempt to work out some more accurate, acceptable and easily applied method of determining the nutritional status of the child. This material is now being analyzed and it is hoped to have the results available for report within a reasonably short time.

The decision to restrict these measurements to the normal children was made because of the absence or rather lack of a common understanding among school medical inspectors of the relative significance of physical defects. On examining the published reports of school medical inspections made in different sections of the country, there is found wide variation in the percentage of physical defects reported. This is due to many things, such as the personal equation, training and experience of individual examiners, but more largely to the thoughtless inclusion of defects without special significance with those that exercise a marked influence on health.

Certain physical defects exert a greater retarding influence on growth, as represented by gain in weight, than others. In a study of this point a number of children with physical defects were held under observation for several weeks prior to operation or correction, and weighed and measured at intervals. Similar measurements were made following corrective measures. Some rather surprising results were observed. For example, it was not possible to show any correlation between dental caries and the weight of the child as shown by change in weight following correction. However, this study has been carried on more intensively at Hagerstown, Maryland, where we have had under observation a group of over 3,000 children for a period of about four years.

There does seem to be some correlation between dental caries

and other mouth defects and school progress. Based on a very careful system of mouth ratings, according to the degree of mouth sepsis and the extent of dental caries, it has been found more frequently than would be warranted by mere coincidence that children, as a group, who have low mouth ratings have correspondingly low ratings in school work. I do not mean to convey the impression by this statement that it is possible to enter a schoolroom and by examining the condition of the mouth of a particular child determine whether or not he is making satisfactory school progress. However, I do wish to say that the results of our investigations thus far seem to indicate that as a group, children with marked mouth sepsis do not progress as satisfactorily in school work as do those who have clean mouths.

School progress and physical defects

Just a word in regard to vision. To my mind one of the most perplexing and probably one of the most important health problems confronting the school authorities is that if visual health. We know, owing to the expense, lack of personnel and lack of time, that medical inspection is carried on to a very limited degree in most school systems. If we knew in advance the more usual health problems confronting us among high school children, the work would be simplified.

Strange to say, on studying the records of physical defects found on medical examination, we find that the longer the child is in school the fewer the defects with the exception, probably, of defects of vision. This isn't exactly true because there is an actual increase in the percentage of children with normal vision from six to eighteen years of age, a decrease in the percentage with moderately defective vision from six to eighteen years of age, and a constant increase in the percentage of children with markedly defective vision throughout the whole school life. The increase in the number of school children with normal vision is probably due to the fact that at birth the child is farsighted, that is, it has a short eyeball which continues to develop until about eighteen, nineteen or twenty years of age. As the axial length of the eyeball increases, the amount of visual defect due to hyperopia naturally decreases. This fact also accounts in large measure for the decrease in the amount of moderately defective vision in the older age groups. On the other hand, in the case of children suffering from marked visual defects, the serv-

ice of the teacher will be most helpful depending on her ability to recognize symptoms of eyestrain that should be brought to the attention of the school medical staff so that preventive measures may be employed. This is particularly true of myopia or nearsightedness which has a tendency to increase in severity in proportion to the intensity of the use of the eye.

Chairman:

Thank you. It seems very important for everyone interested in the development of fundamental health subject-matter to know something of the ways significant subject-matter is developed. May I ask Professor Turner now to give us his ideas in relation to the topic?

Mr. C. E. Turner, Associate Professor of Biology and Public Health, Massachusetts Institute of Technology, Cambridge, Massachusetts:

Cambridge, Massachusetts

I want to make the point that we must be careful in correlating our scientific matter with health, not to be afraid of a fact because it seems to be merely a fact. Let us have students actually know the fundamental chemical and physiological facts of the subject and let us not degrade an old and respectable science by robbing it of its fundamental subject-matter. The two things are not inconsistent, we can both correlate and give a real course in science.

The additional idea I wish to present is this: the course which deals with personal health should also deal to some extent with community health. This world has doubled its population within the last one hundred years. The United States has suddenly become primarily a nation of cities instead of country districts and we are just about to close the first century of the industrial era which has transformed the life of the people of the world. Part of our difficulty in health education is to train the people of America to adjust their lives to this new condition.

May I remind you that the people of America as yet have very little appreciation of what community health activities are. A great deal of difficulty in the teaching of health in the junior high school comes from that fact, for the teacher is not familiar

with the fundamental principles of community health work, industrial health and those activities which go on in the community under official and non-official agencies. Massachusetts has only about three trained efficient health officers even in the cities of more than 45,000 people. The rest of these officials are entirely untrained, appointed for political reasons. The only way in which we can raise the level of our official health activities is to raise the level of the quality of our sanitarians. Until we have a general public which is sufficiently informed to place the appointment and maintenance of the health officer on at least as good a basis as we have reached in the placing of our school superintendent, and the conduct of our health department somewhere near the non-political standard of our school department, we are missing the opportunity to prolong life and increase happiness in a very important way. So I urge that we give our teachers-in-training an opportunity to understand something of the nature of the problems of community and industrial health and prepare them for the work which needs to be done in the secondary school. I believe there is no single factor which can be rightly used to elevate the quality of community health administration more quickly and more directly than the proper use of the secondary school population in an investigation of the local community health standards. I am not going to discuss the subject-matter which I think ought to be included here. I have had some experience over the last eight or ten years in teaching college freshmen in normal schools in this field and if any of you are interested in the subject-matter that I have in mind, you will find it in my textbook "Personal and Community Health" [1] which has resulted from this work. I should like to make a plea for the inclusion of community health for itself and as an excellent method of teaching personal health, in the first course of health which is given in the training school.

Importance of understanding community and industrial health

Chairman:

Will Mr. Van Buskirk outline what biology subject-matter seems essential from the viewpoint of importance to the control of life?

[1] C. V. Mosby Co., St. Louis, Mo.

Mr. E. F. Van Buskirk, Executive Secretary, Cincinnati Social Hygiene Society, Cincinnati, Ohio:

Cincinnati, Ohio

I am going to speak from my experience of the last seven years in work in social hygiene in Cincinnati.

The Joint Committee Report calls special attention to the fact that there is need before the coming of adolescence, for the preparation of boys and girls to meet the physical, mental and social changes of that period. The schools are not meeting this particular need in a definite way. I believe that need is not going to be met in the right kind of way till the teachers are prepared to meet it and I believe that biology has a very definite contribution to make in the preparation of the teacher in normal schools along this line as well as along other lines. Biology ought, of course, to teach all kinds of life processes, reproduction being only one of six or seven.

I believe teachers ought to be prepared to carry on and develop experiments and observational work with the children in connection with the germination of seeds and the study of flowers and how baby plants are formed in flowers, not avoiding the subject of reproduction in animals and following that definitely with the development of the human being. Other life processes also, I believe, ought to be understood in an intelligent, practical way. I recognize the fact that this is only one factor which has to do with health education. The home has to play its part in any kind of program of this sort. At the Chicago Normal College a few years ago, I saw some excellent work being done in biology in connection with the animal family. In short, I believe there are splendid opportunities for such work in teacher training institutions.

Chairman:

You have given a valuable suggestion. Miss O'Donnell, will you tell us what you consider to be the outstanding important contribution to the health program that your physical education program in Skidmore College has made?

Miss O'Donnell:

After the physical examinations in the fall, all the students enter classes according to their general or particular health but

irrespective of their motor ability or any particular bodily skill which they happen to possess. That I feel should not be. There should be further experimentation in motor scales to which every student should feel that she should measure up in order to be able to keep herself fit for the ordinary doings of life, and to have reserve energy for an emergency. We do not know just now exactly what particular skills a college girl should have. In the experiments that have been carried on in connection with the instinctive activities running, throwing, jumping and climbing, some efforts have been made to do this but they are not accurate enough. No one can tell us exactly how far a girl should be able to run in a given time at college age, whether she should be able to throw a ball one hundred feet or more, at what distance she should be able to hit a mark accurately, for how long a climb she should be able to support her body and the muscular control that is necessary to do this. If we could work out some sort of classification of motor ability tests which would place the students according to their motor ability and have them enter a class which would bring them up to the so-called average before they were allowed to elect, the desire to elect would act as a spur to those in greatest need of an incentive. The freshman year I think they should be given a general course so they will know what to elect during the next three years. Those activities should include general gymnasium classes which in turn would include natural gymnastics, movements of the fundamental muscles, games, athletics and dancing. Special classes in dancing should be offered for the upper classmen and also in athletics. These should be elective. There should be a greater opportunity for individual corrective work. At Skidmore because of the lack of personnel, after the physical examination the girls are given special exercises fitted to their needs, and if they are interested sufficiently to work on themselves they are able to improve, but it is very difficult up-hill work for the average college girl to do it alone. I feel this can be done perhaps more easily next year than it has ever been possible to do it before.

Motor ability of college girls

The student health plan has grown from the student need, arising largely from a fear of having some of their "light" privileges removed. The abuse of those light privileges (that

is lights on after ten o'clock), was almost the cause of the removal of that privilege. Dr. Greenough felt that the time was ripe, because of the general alarm of the student body, to start some health work. I have in a previous meeting mentioned the health plan as evolved through the present athletic association. Each student makes a careful evaluation three times a year of her own personal health. From that evaluation the realization came to the students that there must be a definite course in health instruction, particularly for freshmen. It had never been given before. We have tried to give it but the administration met the directors' request with the statement, "You have objected to the heavy load which the students are carrying. It is very true they are very much overloaded and now you wish to add another course." But when the student request came it was a very different matter and the entire college schedule is going to be rearranged so that the students will have that health instruction and so that they may be free an hour earlier in the afternoon to participate in outdoor sports.

College students request health instruction

I think the general situation and the voluntary comments from the students which have come as the result of these personal standards which they have set up for Skidmore College have proven the degree to which they are working. There are always the unsocial few who do not cooperate but at least the students feel it is their responsibility.

Mr. John W. Shepherd, Assistant Principal, and Head, Department of Science, Chicago Normal College, Chicago, Illinois:

Miss Busell the head of the Physical Education Department in our school is here and you might be interested to have her at this time tell how her physical education goes on in the form of play.

Chairman:

Will Miss Busell describe the plan?

Miss Nellie E. Busell, Head, Physical Education Department, Chicago Normal College, Chicago, Illinois:

The organization of play Mr. Shepherd speaks of is an organization which is powerful because of the division of our

schools. Instead of the customary divisions, students are divided when they enter, into groups of thirty each and those groups stand as groups until they graduate. The group makes an ideal unit for athletic competition, as a group of thirty comprises a first and second team in most games. That is the backbone of our work in physical education. The organization of the teams has been a powerful motive and we have over a thousand girls continuing their athletic activities beyond the requirement. In our last indoor baseball tournament (which is likewise voluntary) we had over a thousand girls on ninety-three teams. It also shows the strength of the motive in that the teams continue to play after they have left the normal college. We have an alumnæ athletic club which has been organized only two years which gives the teachers an opportunity to continue exercise, which is of course, a fundamental health habit.

Group system in physical education

Dr. Owen:

I was interested in one fact in relation to the plan described by the last speaker. We found that if this play arrangement developed any further we couldn't take care of students after school, so instead of shortening the day it really lengthened it. Our play activity begins in the morning and has to go from nine o'clock on to three or four in order to take care of the number of students. So again we found the health course making the official program rather than the other way round.

Chairman:

That is the ideal toward which we would like to move. We should like the health policy so fundamental as to direct the growth of the other things.

We should like to hear now concerning the way in which these various contributions are put together in one or two other institutions. Miss Bell, will you talk to us on the way the work of health education is conducted in your institution?

Miss Bell:

In the State Normal School at Kalamazoo, as elsewhere, one of the important pieces of health education work, of course, is the curriculum making. Last fall there was no health education

whatever and very little interest apparently was shown on the part of the various departments. The first term we were unable to start a course in health education or to interest anybody in the subject. The second term a course in health education was given. The teacher of hygiene did not feel that time could be given out of hygiene for health education. He offered to let me come in and talk to some of his students about health education occasionally during the first term. That offer I refused. So the second term I started the course with twenty-six students who had had every variety of previous training. As you know the normal school has one-year students, two-year, three-year and four-year students. These students represented so complete an assortment I decided to hit the high spots and be thankful for the opportunity to do that.

State Normal School, Kalamazoo

I started off with the health of the individual students, offering conferences to those who wished conferences, but never urging or forcing conferences on them. Then I took up the condition of the children in the schools, and the responsibility of the teacher. I gave two-thirds of the time to hygiene, because they were not equipped in hygiene at all and one-third I gave over to methods.

A very interesting thing happened at the end of that course. One or two of those students came to me and wanted to know where they could get additional information and what course I would advise them to take where they could get more health work. I hardly knew how to advise them. The second term I had over forty students and out of the forty only six had had hygiene at all. The course will in future be broken up into two courses, one given over entirely to hygiene of the school child, the health environment and the health conditions of school children and the second course will be a course on methods. That course will be fitted to the needs of the students. In addition to that there will be a personal hygiene course of two hours a week which will take up not only the responsibility of the individual but of the community. There are advantages and disadvantages of personal hygiene carried on in required courses. If the right person teaches it I don't think it need be made a required course. It should be given to the first year students and the other courses should be left free to the student who desires to take them.

Now as to the question which Miss Dolfinger asked, how are you organizing for the needs of the students? I am doing it largely through finding out what the students know before I begin with them so as to avoid as much duplication as possible. There is very little correlation just now. There will be much more later on.

Chairman:

Will Miss Henderson give us her thought about the contribution of social hygiene materials to a health program?

Miss Gertrude Henderson, Publication Secretary, American Social Hygiene Association, New York City:

I find that what I wanted to say about social hygiene is just a particular application of the things President Owen said at the beginning of the meeting. The movement for sex education began and people thought of it as an imparting of the facts of life. The phrase seems rather quaint and naive now, as if there were only one set of facts of life. The leaders of the sex education movement now are quite well aware that it is not so simple a thing; that sex education must be given in different ways, not just in a single lecture or a single course of lectures, or even in an aloof and lonely course called sex education, probably branded by being so named. Those emergency measures were the beginnings of sex education but the movement has gotten very far away from that now. Lectures are still being given. The American Social Hygiene Association, from which I come, keeps a number of lecturers in the field who are doing that thing but we are regarding it as wholly emergency work. We are thinking of it as having for its ultimate purpose the destruction of the need of such lectures. We are recognizing that the only real way of teaching sex education is to integrate the topic into courses of study in institutions; perhaps first college and normal training institutions, then high schools, and presently the very lowest schools.

Sex education a long process

We recognize that sex education is a very long process. It involves three quite distinct things. First, the creation of an attitude of mind; second, imparting a body of facts; and third, developing a technique in living. The second can be done. Mr.

Van Buskirk has spoken of that so I don't need to. And of course the place to integrate this teaching in the school and college courses is in biology courses, hygiene and psychology courses, etc. That can be done and is being very well done in institutions.

The creation of the point of view is a very slow process but would be comparatively simple if the educators had a fresh field in which to start. They haven't.

We, in this generation, are the heirs of so much inhibition, of such a tangled attitude of mind toward the whole field of sex; we have made such a confusion between pathology and sex, we are so far from clear in our own thinking that it is very hard for us and will probably be hard still for the people of the next generation to make in ourselves a clarity of mind that meets the clarity of the children. The big task of sex education is to change the public attitude of mind so that that clarity with which little children regard the whole of sex and social relationships, the whole emotional life in its sex aspects, will not be interrupted as the children grow to the age for entering the normal schools and colleges.

Importance of sex education in normal schools

The extreme importance of sex education in normal schools is in the fact that the normal schools are the schools which are able to give the teachers of the next generation of children and the parents of the next generation of children the facts that they need and at least a start toward the attitude that they need. I think that development of the attitude cannot be ascribed to any particular course. It must be in all sorts of courses and handled by teachers who have the breadth of view, the experience of life, and the mellowness of mind to be able to handle it successfully.

The same thing is true of the development of the technique of living. That must be done by everyone everywhere in the colleges and normal training institutions.

Chairman:

I asked Miss Wyman to outline for us some of the difficulties of the very brief normal course for I am sure they will raise very important questions upon which we need the help of many institutions and as much time and thought as possible. Miss Wyman represents a two-year training school.

Miss Mary M. Wyman, Head, Science Department, Louisville Normal School, Louisville, Kentucky:

Health education course in Louisville Normal School

We have a two-year normal program for about two hundred or two hundred and fifty students. We give training in student teaching during that time so the entire two years does not belong to the Academic Department which means that we have to condense considerably. In our first year we have a system in which the students are given some opportunity for participation and observation in the practice school. During their second year one-third of our entire time, an entire period of ten weeks, is spent in the city schools teaching and the other ten weeks are spent in the normal school in health education subject-matter.

The first year we have a nature study course which is closely correlated with the work in health education. We take up such topics as the girls will be able to teach to the children. We study subject-matter as well as the methods of teaching. In each topic we take up, as insects, birds, trees and animals, we discover what subject-matter we need to know and we always keep in mind that it is a minimum amount which students get.

In the second year we have a health education course lasting for a period of twenty weeks, three hours a week which means sixty hours in the course. In this course we have to give subject-matter because all of the graduates from the high school do not have physiology and hygiene. Some have general science, some chemistry, some physics, some biology, a few physiology. We have to consider subject-matter, therefore, as each topic is taken up. We have to remember what we are going to do with it in the schools, such as how we are going to teach it to children; what materials we are going to get; how are we going to use what we learned last year; what other materials can we get; what can we put in the hands of the children and how can we use this material? We have observation lessons that run parallel with each topic. Demonstration lessons are given and last year every student had some opportunity to teach health during the practice teaching.

In the academic period the student plans a health program. A senior girl goes out to teach this program in the first ten weeks of the senior year, and in the second ten weeks she plans a health program for a similar situation she expects to have

next year after graduation when she is a full fledged teacher. If she goes out the latter ten weeks, she has to plan her health program for the definite situation she is then going through. We try to provide extra experience and pleasure in work through a science club that permits of excursions in the afternoon in which the girls can develop some outdoor nature interests.

Dr. John D. McCarthy, Instructor in Health Education, New York University; Specialist in Behavior Problems of Children, New York City High Schools:

I wonder if this Conference wanted to consider the advisability of recommending that teacher-training schools include courses not alone in psychology but in child study. The ordinary mechanic knows his material very much better than the average teacher knows hers. You can talk to the ordinary carpenter and he will tell the various kinds of woods and the grain and the stress and strain of each kind. I wonder if teachers don't need more information of that sort. I wonder if the teacher-training schools won't include as a required subject, a course along that line.

Child Study

Dr. Wood:

My definite impression is that some of them do. How many of you know of teacher-training institutions that have courses beyond child psychology and child study?

Mrs. Selbert:

I would like to tell you about the Ohio State University courses. We have two courses, one on child health given in the Department of Public Health in the College of Medicine and we use that as our laboratory school. The Grand View School is situated very near the Ohio State University and it is the school in which our public health nurses get experience for school nursing and we use that for child study. The other course is devoted to child welfare. It is given in our Department of Home Economics. We have a nursery school in the university and the children who come to the nursery school are used for child study material. The students care for these children completely from about nine o'clock in the morning to about four o'clock in the afternoon, even preparing their lunch and serving their lunch,

cleaning them and getting them ready to go out, so they have very concrete and practical experience.

Chairman:

Who will describe another child study course?

Mr. Harvey L. Long, Director of Health and Physical Education, Public Schools, Lincoln, Nebraska:

Several courses are given at Iowa State University. The courses are under the direction of Dr. Bird Baldwin. They have their nursery school where they make practical study of the small children.

Miss Grace George, Assistant Professor of Hygiene, Central Missouri State Teachers College, Warrensburg, Missouri:

"Adopting" children for child hygiene class

In one course at Central State Teachers College the student teachers may adopt any child in the community. It may be a pre-school child. Also in the child hygiene class, the students adopt three different children,—one child who is overweight, one child of normal weight and one who is underweight. These children are studied and reports are given to the class in general of what they find in these studies. The pupils enjoy it and we find even high school students love to study it.

Dr. Blunt:

We have courses in the Home Economics Department of the University of Chicago, and other departments. The one course which we call Child Care, discusses the general care and physical development of children largely, with some emphasis on the mental building up of children as well as the physical. Then last year for the first time we had informal work and next year are going to have formal work, a regular course in the feeding of children in our nursery school here which is associated with the University of Chicago. This summer we have a child psychologist, Dr. Ada Arlitt, who is giving the child-training course.

Miss Florence Imlay, Director, University Cooperative Pre-School Nursery, University of Chicago:

At Ames, the Iowa State Agricultural College, there is a nursery. There the girls get practice in caring for children in

regard to clothing and feeding, etc. The children are there, and the students have to take care of them. At Cedar Falls in the teacher-training school, they have in the Home Economics Department a course called Care of the Child.

Miss Bell:

I was just going to say that in addition to the study of psychology at the training school in Kalamazoo, each practicing teacher has a group of children whom she studies according to the outline, health being one of the studies, so in that way special study of individual children is made.

Dr. Wood:

Is there another institution to be reported at this time?

Dr. McCarthy:

I think what we need is a well-rounded study of child development, including not only anthropological studies and psychological studies but studies of behavior.

Dr. Wood:

I should like to suggest very briefly three points. Let us come back more specifically to the topic, "Organization of health education subject-matter in undergraduate courses." First, the basis for the training of a teacher to prepare her for health education should be a definite, practical program of teacher service. Second, the incentive to wholesome living for the student in teacher training should be a composite incentive. She is to be interested on the basis of her individual instincts to be well and wholesome, but she is to be motivated all the time more effectively, more perfectly by the professional, social motives combined with the personal. Third, every course which provides in its content subject-matter in the training of the student for her work in health education should be conducted with a definite recognition of the contribution to be made.

Health education training based on service program

I am in sympathy with the idealistic point of view that President Owen has given you. We must have a service program on which to base all this training. How are we going to harmonize that with actual conditions in our teacher-training insti-

tutions? Certainly, a program is to be preferred to a series of numbered courses but the courses are there, and they are going to stay there for a long time.

Dr. Owen:

The answer is perfectly simple. Just do it.

Dr. Wood:

Practical compromise

My suggestion for our practical compromise is this: let us have an interdepartmental health education committee in every institution of this type to act as a coordinating committee. Let us have practical tests and criteria to which we will submit every course supposed to make a contribution. May I suggest as one of the studies to be made, a practical evaluation and testing of these contributory courses of instruction in these institutions, to find out practically what they do contribute, not only in fact but in spirit and in professional attitude with reference to this program.

Mr. Shepherd:

When we undertook the cause of health education it became evident at once there could be no department called the health department because there was no one man trained fully enough in all the subjects that are contributory to this. Pragmatically then we called together all departments having anything to offer that would help on a program of health. That put it directly up to the whole teaching faculty. We called on all the departments and we sat down to the question of those things which that department ordinarily offers that will contribute. The physiologist who has a doctor's degree in physiology from this university said, "Why, of course we want physiology." "That is not enough," we said, "what kind of physiology?" Now here is where the real crux of the whole situation lies. What kind of physiology? The kind that a university offers? It became evident that unless we were careful we were going to have the usual course in anatomy and physiology and so on. So we said, "What are you going to put in, that has to do with health education." May I say here that the teacher in physiology almost wept because we insisted that the physiology given should be under the

title of health and the student who goes in understands that she is going to work on a health program. Now as to sciences, it seemed to us that only those sciences and those aspects of a science belonged that made intelligible the practice that we wanted inculcated.

Not all the physiology belonged. Rather, only those aspects that deal with and make clear and intelligible to the one who practices it, the formula that is prescribed first. There is a time to tell a child when to use a toothbrush. You can't tell him scientifically why to use the toothbrush and yet you want him to be practiced in its use. There will come a time, however, in his study when he ought to have the scientific fact back of the use of a toothbrush. Therefore those aspects of bacteriology and physiology, etc., that deal with the teeth in that relation belong in the teacher's course. There are, however, lots of physiology facts that go into a college course that have no place in the normal school course, and only clutter up the whole machine. This is true of other subjects. Get the faculty together, everybody who can contribute, but you will need to change the courses that have been called "fundamental sciences."

Need for changing so-called "fundamental sciences"

This year we have spent the whole year in our department in knocking to pieces one course that we have had given heretofore, because it is not yet close enough to the job.

Summary of Section II, Topics 2 and 3

SELECTION AND ORGANIZATION OF HEALTH EDUCATION SUBJECT-MATTER FOR THE TEACHER IN TRAINING.

CONSIDERATION of this topic brought forth discussions extending from present conditions as found in a survey of teacher-training institutions in thirty states up to what seemed an ideal program. The following points were brought out:

1. Whereas the function of the teacher-training institution is primarily vocational, rather than academic, a reorganization of subject-matter differing from that of the college is indicated.

2. The purpose of health education in the teacher-training institution is twofold:

a. Promotion of the highest degree of personal health and social efficiency among the prospective teachers.
b. Development of an intelligent understanding of the essentials of child health and the means of realizing these objectives.

The above consideration should determine the organization and selection of subject-matter in training schools.

3. It was advocated that schools treat the health program as a policy rather than a set of courses and that it be made fundamental. The contribution to the students' well-being was offered as the criterion for the selection and organization of school health services, and the organization of subject-matter (especially in the field of science). In accordance with the foregoing, the following criteria for organizing subject-matter were presented:

a. Is the subject-matter scientifically sound?
b. Does it contribute to the realization of the purposes of the health program?

These latter criteria limit the amount of technical subject-matter, as in physiology, anatomy, bacteriology, to that knowledge which is necessary to successful control of life processes.

4. It was further suggested that students, through access to laboratories and observational centers, get some conception of the method by which the validity of subject-matter is established through experimentation and research.

The bases of the health education program in the teacher-training institutions were summarized as follows:

a. The definite, practical health education program expected of the teacher in service as shown by a job analysis.
b. The use of incentives to wholesome living on the part of the student which should be a composite of the professional, social and personal motives. Not enough emphasis has been placed on the professional and social motives.
c. Every course in the institution should be conducted with a definite recognition of the contribution it reasonably can make to health education.
d. An interdepartmental health education committee should be established in each teacher-training institution. The committee should organize the interdepartmental program and coordinate the work of the various instructors and courses.

e. Tests and criteria should be developed for the practical evaluation of the specific contributions of each course to the school health program.

The discussion brought out the following points which were thought to offer suggestions for organization:

a. The futility of attempting to teach nutrition or home economics without practical nutrition service.
b. The necessity of public health knowledge based upon community needs.
c. The value of a concrete study of the physical condition of pupils made by bringing before student teachers, children showing signs of poor and good functioning, of strength and weakness, etc., that they may learn to recognize these signs, and upon the facts discovered build a sound foundation for health habits taught with a view of "putting and keeping the instrument upon which the teacher plays, in tune from day to day."
d. The usefulness of a working knowledge of mental hygiene, especially of the emotions, in the health program, as for instance, in gaining the cooperation of pupils and parents in firmly establishing health habits, in getting up to weight, etc.
e. The importance of biology as an essential subject-matter field furnishing the scientific facts for sex education.
f. The indispensable value of developing wholesome attitudes toward sex, reproduction and life, through the direct and indirect factors and influences, to replace the emergency, short or special courses in sex hygiene which are always unsatisfactory makeshifts.

For studies, see Recommendations, Section on Teacher Training, Investigation Nos. 1, 5 and 9.

Topic 4: TRAINING IN HEALTH EDUCATION FOR TEACHERS IN SERVICE

Chairman: Dr. John D. McCarthy

Chairman:

THIS session of the Conference is to take up one of the most important tasks, the training in health education of teachers in service. We all know that the facilities for such training are very slight indeed. You can find opportunities here and there for extending the training, but these facilities

have not been well organized, well coordinated, or well handled; they are not directed toward any definite goal. I shall try, in opening the discussion this morning, to indicate one plan by which we may coordinate our aims so that when we finish we shall have something like a symmetrical whole.

The matter of health education is going to be one of the most important contributions that has been made to education in a great many years, not solely because of the subject-matter but because of the change of point of view which it is bound to bring in the educational field.

Up to this time attention has been largely focused on the subject-matter of education, and the child himself, I think, has been largely neglected in spite of the fact that two or three hundred years ago a distinguished leader told us that after all, the child should occupy the center of the stage, and that the educational processes should be built around him. In spite of this, I say, we have attempted to build up curricula and syllabi, and plaster them down on the heads of children.

There have been in the teachers colleges, training schools and in schools of education, a few courses in child hygiene, child psychology, etc., but I think very little study has been made of the child himself, the child as an individual, as a living, functioning organism which manifests himself not in one direction but in several directions. I believe that health education is going to turn the spotlight of attention on the child, and that the educational plans which attempt to give the child some freedom, and to educate him in terms of his own nature, are simply the precursors of a movement which is going to straighten out our point of view in regard to this problem. In the future I believe and hope we shall have less attention paid to the curriculum and more to the child.

Turn the spot-light on the child himself

A child is the most marvelous thing we can find in all nature. Think of a human being starting existence as a speck of material that looks very much like jelly. Think that it develops into a human being with faculties for speech, logical faculties, maybe with the mind of an Aristotle! It is the greatest mystery of all creation. It would be very helpful if teachers would think of a child in such terms as an organism which is manifesting himself in a great many directions.

Now, what can we do to amplify our knowledge of this child as an organism? Well, in the first place we have to learn more about the child, his nature and his needs. What is a child? What is he in terms of several different things? What is he from the biological standpoint? What is he from the standpoint of development, what is he from the physical standpoint? What are his physical defects and problems? What is he from the standpoint of endocrine glands? How far do they go in determining his nature, or at least in conditioning his nature? How does he manifest himself as a thinking, feeling individual? What is his emotional life? How does he react in terms of other human beings—how does he get along in his various contacts with them?

If we can answer these questions, we shall know better what is needed in the whole field of health education.

When we think of this child on the physical side, we think of him as having certain problems of nutrition and certain problems relating to motor activity. Therefore teachers of health education, after they have satisfied their desire to know something about the child as an organism, are going to want to know something about his nutrition and about him as an active motor organism.

Courses should be offered by extension departments of universities, by summer sessions and by institutions of education generally. It seems to me, however, that the emphasis in such education should not remain on a purely technical, laboratory basis, but, on the other hand, the significance of the subject-matter should be tied up with the actual problems that we come across in dealing with children. That is the way that the subject-matter should be applied by teachers. They should not only know what vitamines are, that there are at least four different groups of them, and that a deficiency in Group A leads to this or that, a deficiency in Group B leads to something else, but the teacher will want to know what sort of food should be provided for the child in reference to these vitamines. We can demand of the universities a course in nutrition which we can use, not for a short time in our studies, but which we can use to the great practical advantage of children.

Tie up subject-matter with actual problems

In regard to motor activities, the universities are taking care

of that pretty well. They have had courses in physical training; perhaps we would prefer to call them courses in physical education or courses in motor activities. But we can tell them what our problems are. We can tell them we are not interested in building up a lot of gymnasts but that we do want to develop organic vigor; that after all we regard physical education as simply one part of the educational process, the problem being to produce human beings who will function to the greatest possible degree. If we can develop that idea, I think perhaps they will work out courses that will be of more use to those who are directing recreational centers and playground activities, and physical training courses in high schools and elementary schools.

I have spoken by way of suggestion of the manner in which the child as an organism manifests himself along certain physical lines. I should like to have you think now of the child in relation, first, to his physical environment, and then, second, in relation to his personal environment.

The child's physical and personal environment

Now the child as an organism is constantly in conflict with his environment, or we may say in touch with his environment, not necessarily in conflict with it. Therefore in order to extend our knowledge of this field logically we want to know something about the features of the child's physical environment, as pertaining to his welfare and how they affect him as a living being, problems of water supply, sewage disposal, food distribution, and all those matters. I do not need to go down the list because you are perfectly familiar with them.

Then we can think of the child in his relation to other persons. I am going to emphasize one relation as especially important, which has not been emphasized adequately—that is, the child in his relation to his parents. Here is the greatest function that a human being is called upon to perform, that of parenthood. How many colleges or universities have attempted to equip students in that field? As far as I know, very few. I should like very much to see a course in parenthood in every school of education in every college, every institution that trains men and women. Parenthood after all should be a profession. In a quiet way, there have been plenty of individuals who have taken their jobs seriously.

Teachers have an opportunity to influence parents. They

come in contact with the children. They continue the association for a good many years, five days in a week, standing in the place of the parents, consequently the child frequently substitutes the teacher for the parents. The teacher may actually become an escape for the child. It may be that there is a disagreeable home situation and the teacher is the only escape that that child finds from the home atmosphere. We ought to educate parents in their duties and responsibilities, and children in the obligations which they owe to their parents. I am sure every one of us would have benefited if we could have done a lot of thinking along that line as we grew up.

The other aspect which I am going to mention is that of social and mental hygiene; how does the child adjust himself to other individuals? How does he get along, is he happy, does he express himself along normal channels and to normal degrees, or not? Man doesn't live by bread alone, neither does a child, and we must think of this functioning organism in terms of his conduct as well as his physical self. Therefore we should ask the directors of summer sessions and the extension departments of the universities to provide courses along these lines of mental and social hygiene so that we can be better equipped to handle this aspect of the subject.

Work in mental and social hygiene has been only very lightly touched upon in this Conference. In order that I may concretely lead the discussion as to what needs to be done, I am going to tell you what is going on in one university, not because it is unique, but to show you what universities can do.

At New York University in the School of Education we have a Dean, who is wideawake, progressive and active. Under the direction of Professor E. George Payne, there is developing a Department of Health Education. That department at present presents the following courses: First a course in the principles of health education, second, a course in nutrition and growth, and third, a course pertaining to the problems of health among the poor which takes it up more from the social aspect. In addition, there are three courses, one in mental hygiene, one on the nature and needs of the child, and one on behavior problems among children. I have been very much interested to see the response that teachers make to the latter course. They take the

Behavior problems

information and apply it to their own problems, and they find the information of value in straightening out little kinks in their own make-ups,—we all have them.

We are going to have the opportunity now, of hearing several different persons tell us something of their problems and some of their conclusions. Miss Barker will discuss this subject.

Miss M. Elizabeth Barker, Assistant Director, Health Education Department, Tulsa Public Schools, Tulsa, Oklahoma: Tulsa, Oklahoma

Our work was new this year, and we were fluttering in a desperate effort to begin from where we were.

The working program calls for supervision of the health teaching done in the first seven grades. Tulsa is not a large city, about 125,000 people. We have 500 school teachers and 28,000 children.

There had been no organized work in health teaching although there had been very effective work done by individual teachers. In our high school there was a very excellent organization of many community groups which were doing excellent work in health.

Among the people of Tulsa it was a question of interest which had to be built up. Our objectives, of course, were those which every one of you have had. We wished first to achieve physical health for the children, and we wanted to enlist their interest, so that the responsibility for health could be placed upon them, and so that the boys and girls might be able, through their habituation of health and safety duties, to become better, happier and more useful citizens.

The work with my teachers was new and experimental. I had key persons in each of the twenty-two schools, who were teaching the science and had been given the health work to be done in a platoon system. These key persons in each school formed a committee which I found most useful and valuable in getting acquainted with the situation.

Through a very constant urge we were precipitated into the formulation of a tentative course of study, which of course, we found was inadequate. In order to build it as we progressed, it was formulated in the form of bulletins which went out to each

grade teacher every month. These bulletins were given out usually at teachers' meetings, each grade having a separate and distinct meeting at which we tried to get general discussion. It was difficult to get people to express themselves so wherever I found teachers doing exceptional work I asked them to come in and demonstrate their methods to the other teachers. That usually developed discussions. As we progressed through the year and knew the situation better, our bulletins incorporated the material which was more particularly suited to our situation.

First of all I tried to give my teachers a conception of the type of health education we desired, and in the bulletins, I presented definite suggestions always prefaced with a statement of objectives. Particularly was an effort made to help develop attitudes among the teachers. We could not get teachers who had all been prepared alike; we did have an exceptionally fine teaching corps, but those teachers had not had specific training in many cases, and many of them felt that health teaching was either something aside from the rest of the curriculum, or that health teaching was something for the nurse or a special teacher to take care of. I wanted to develop the idea that health education was something which each home room teacher must feel responsible for and must succeed in doing, so that she might be successful in all her work. We find that there is a necessity for teachers having more help. But teachers who are carrying a heavy load find it difficult in the evening to take extension work. I don't know how we are going to meet that situation.

Dr. Wood:

Has anyone an answer to the problem of supplying teachers with help, aside from definite courses?

Miss Elma Rood, Director of Health Education, Child Health Demonstration, Mansfield, Ohio:

Child Health Demonstration, Mansfield, Ohio

We have about 100 teachers who are in service in a city of about 30,000 people. Then we have about 175 teachers who are scattered around over a rural area in about one hundred and fifteen one-room rural schools and six small villages.

To get material to these people who are in the rural field is

quite a problem, especially as most of them are far removed from a library. They have very little material excepting the free material that they can get through the government publications, any many of these teachers are young, and inexperienced in adapting technical materials. Many are really just children, eighteen, nineteen and twenty years of age, with very little experience in handling children; just getting their first opportunity to organize and handle a school; and it is our job to get material to them in such form that they can use it.

Monthly bulletin for teachers in service

Our monthly bulletins have worked out better than anything that we have used for the last three years. Assignment of special health topics for teachers is not of very much value unless we know that those teachers have the basic material to work with, and many of these schools have only formal physiologies for use as reference books.

Many of the teachers do not come in for eight and ten weeks at a time in the winter, on account of the roads, so that it is quite useless to give them detailed references. They can't get them. It is necessary for us to give them the basic material, otherwise the health work cannot function practically in their schools.

Last summer it was decided to concentrate in the whole county on certain topics, with the idea that it is good psychology for a large number of people to be working on the same thing at the same time. The city and rural school administrations passed favorably upon this, so that it meant that the entire county of 10,000 school children were working on the same health topics with the same general aims. I will tell you briefly, what these topics were. We tried to keep them down to the most simple essentials for healthy living.

In the month of September, when schools open, we took up the subject "Organizing your school," because we wanted these teachers to see that it is very well to have the children's activity back of any health program. In many cases the teachers have never organized a school with the participation of children, so this little bulletin suggested one way in which they could organize their school into a club. They could organize a good health club, a good citizens' club, a Young-America club, or anything else they wanted.

It was suggested that they have a captain, preferably chosen by the children after the first month. Perhaps the first month some teachers would require a little assistance. This organization was carried out in about 94 out of the 115 schools.

School organization and morning inspection

One of the biggest things that we hoped to get over through this organization was the morning inspection in all schools in the county. This was carried 100 per cent in the schools of Mansfield, and in about 94 out of the 115 schools in the county. The two purposes that were emphasized in this morning inspection were, (1) to encourage the children in habits of cleanliness and orderliness, and in such health habits as could be checked upon in the classroom, and (2) to give the teacher an opportunity to observe the children for any symptoms of departure from normal. The inspection often did not take more than three minutes to conduct, and never more than five after the teacher became familiar with the procedure and the children knew what to do. It has very materially improved not only the cleanliness of the school and surroundings but it has improved the condition of the children themselves. It has reduced the amount of contagion in our schools tremendously. It has increased the teachers' cooperation with the nursing service. Calls would often come in from some teacher asking for a visit to be made either to the home, if the child was sent home, or to the school if there was a suspicious condition in the schoolroom. The effect of the morning inspection can be seen all over the county. Reactions came frequently from the parents during the month of October, because the subject of cleanliness is a big problem in many of our rural schools and many mothers appreciated what the school was trying to do.

October was given to the subject of cleanliness. The bulletin sent out included helpful material of various kinds; the physiology of cleanliness, stated in very simple terms, just bringing out the essentials; what it meant to have a clean school and what it meant to have clean children. The importance of a sanitary water supply was also emphasized. The main topic was cleanliness. The teachers in the upper grades chose material that would fit their course of study while the primary teachers chose from the bulletin the parts they felt they could use the best.

The bulletins gave suggestions for general devices which teachers could use, but no attempt was made to grade these.

Topics for monthly bulletins

During the month of November we specialized upon teeth, the care of the teeth and the reasons for such care, the aim being to obtain practical results. We immediately began to get reactions and soon children were coming in large numbers to the dentists. The concentration of all these children on that one thing seemed to carry over into the homes, and in many cases children for the first time were brought from the country as far as twenty-five or thirty miles to make their first visit to the dentist.

In the month of December we specialized on foods, what to eat and why. In that month many of the children decrease the amount of vegetables eaten and very often they do not have much fruit. As the "first killing" of the year takes place then, this means that the children have fresh pork, gravy and potatoes. So we specialized on foods that children should eat, and all during the month of December special emphasis was placed on vegetables—out of a can if mother couldn't get them in any other way—fruits, cereals and milk. The outline contained the main essentials of a healthful diet for children which was followed by suggestions for devices that could be used in the schoolroom to get it over to the children.

In the month of January, because many of our country homes close their windows then, we took up especially the subject of fresh air from the standpoint of physiology, the need of air in the human body, the effect of good air upon the children in school, with devices for teaching in the various grades.

In February we took up the subject of exercise because we found that the children liked to stay around the big round stove in the little country school at recess time and at noon, and not go out to play. On checking up the results, it was found that many children played outdoors morning, noon and recesses, and the number of children who liked to stay around the teacher's table and visit, instead of going to the playground, decreased.

In March we took up the subject of correcting defects among the children. The subject of sleep was taken up also, although the month of March was the month of physical examinations for the children in the city and village schools.

I might say that one of the projects of health education work was to make this health examination something that really belonged to the children. It does belong to the children, and why shouldn't they be interested in it? Preparatory work was done with the children by all the teachers, also follow-up work as part of the educational program. As a result, defects began to be corrected immediately after the health examinations were completed.

Blue Ribbon children

In the month of April we had planned to have a campaign for Blue Ribbon children, the Blue Ribbon to represent the recognition of achievement. It represented to the teachers and to the children the objective of the year, one which they all would like to have their boys and girls attain. During the month of April I can't give you the exact number of children who came in to the city for reexamination, as a result mainly of the work of the teachers in the rural, village and city schools, but by May 2d we had 2200 children who qualified, who came up to the requirements.

Very briefly the requirements were these: the children must be within 10 per cent of their normal weight and not more than 20 per cent above normal. They must have cleared all defects as shown by their examination card. The teacher must pass upon their health habits as reasonably satisfactory; the child's conduct, his behavior and his attitude toward the other children must also be good. His grades must be average in all school subjects. That does not mean that he could not be below C, perhaps, in some subject which was very difficult for him, but he must have an average grade of C, this being a provision made in order to eliminate children who were recognized as subnormal coming into the Blue Ribbon class.

On May 2d close to 2200 out of the 10,000 children in the county, came in to register in a permanent record, as Blue Ribbon children. We hope to make this a yearly event, so that in May, 1926, we look forward to having 4,000 children in the city and county qualify in this class.

The result has been an enthusiasm on the part of the children. So many requests have come in, that the demonstration director has decided to open the yearly examinations to all elementary children, if possible, instead of first, third and fifth

grades and underweights. The response has come from the children and from the parents: "I would like to have my name in the registry every year; how can I do it?" That is one of the purposes, I think, of the examinations. We must get the children's enthusiasm back of it, we must make them feel the health examination is definitely a part of the health education work, or we will not get the reaction that it seems to me we ought to have. I believe a yearly examination for all children is a habit we ought to establish while the children are in school, then we will not need to worry about it when they are adults.

Traveling exhibit of classroom work

In the month of May the teachers specialized on getting their materials together that they had kept from their year's work, or on their health shelf, in order to make a portfolio to be placed in the traveling exhibit. In this exhibit it was planned to mount a collection of the children's work, to route through the state to schools which were interested in developing a health program. The teachers were encouraged in the counties, villages and cities to select such material from the children's work as they felt would be helpful to a teacher who had never done any health work in her classroom of a practical nature, but who was interested and who wanted to do it.

The materials collected included posters, health slogans, cutout letters mounted and used in practice work, cover page for health code, original devices for checking on water drinking, paper cups constructed and examples of health correlation. The materials are arranged so that the exhibit can be folded and packed easily. It includes a primary section, an intermediate section and a grammar grade, besides a distinctly rural school exhibit, so that it will be possible to help places in Ohio and elsewhere, which are interested in beginning a program of this kind.

This material is not special exhibit material. It is typical classroom work, such as the spelling exercises with health words, correlations in geography, history, penmanship, music exercises, correlations in art, anything that would show the teacher how health should permeate the school curriculum instead of standing out by itself with a little line drawn around it, correlations that she will be able to use if her eyes can be opened to see the opportunities at the time that they come in the classroom.

Miss Mary E. Spencer, Health Education Specialist, National Catholic Welfare Conference, Washington, D.C.:

National Catholic Welfare Conference

When Miss Oppen asked me if I had a contribution to make, I said No, I had no contribution, but I had any number of problems that I had come here from Washington to have solved in this particular Conference.

Miss Barker has already helped to solve one of them, especially a city situation in regard to health education, but there is another one which I want to present. Now in order to understand just how large a problem we have, I might cite the fact that in our school system throughout the country we have 2,000,500 children in our parochial schools. We have at least 10,000 schools and colleges and 70,000 religious teachers. The National Catholic Welfare Conference is aiming to interest our Catholic schools and Catholic teachers in the field of health education.

It is wholly impossible for us to get out into the schools to do work, so our first endeavor has been to reach our teachers. We have been doing this through visitation to the institutions in various parts of the country, giving single talks to the sisters and lectures of one, two, three or five in number.

Last year we tried a new scheme of reaching the teachers through their teachers' institutes. We reached about eighteen different communities in the diocese of Boston, and about a month ago twenty-two different communities in Brooklyn, New York.

We have the Sisters College in Washington. Theoretically, the sisters receive their two years of normal training in the novitiate, after entering the Sisters College, which really runs something on the plan of Teachers College in Columbia, in that teachers go there after they have had two years of preliminary training and some teaching experience. The teachers do not, however, remain four years. Some stay two years, others have done a great deal of summer work and come there for one year of training and to get their degrees.

In the past two years the only thing that has been possible there has been the giving of single lectures in the evening during the winter. Usually I have given possibly seven to ten during

the winter. These have been open to the entire student body, and we usually get an average attendance of about 125 out of 150 students.

It is my feeling, however, that we have reached the point where we should give a regular course in health education, which of course, can only be an elective. My problem is this: we can have one or two hours a week for the coming year. I wonder what the feeling of this group is in regard to the organization of that course? It means that I shall have to give them both background and teaching methods. In order to get the bachelor's degree, the sisters must have a minimum amount of foundation in chemistry, biology, physics. If they enter with the required training and instruction in science, they take no further science there, unless they care to, so that working on this basis I shall have to give them a background of personal hygiene, public health, nutrition and psychology.

Courses for Sisters teaching in Catholic Schools

I shall try first of all, to stress the importance of health to the sisters themselves, through giving them the complete health examination which has never been given yet. But we are going to try to get the physician who will give the complete health examination, and then to put over to the sisters the idea of not only the correction of physical deficiencies, but if possible the ideal of vitality plus, something more than just enough to get along. In doing this we have to consider of course, the living conditions. The sisters carry a very heavy study load. In addition they have extra activities, such as prayers, devotional exercises and other duties which use their time, but I am hoping we can do something along the line of recreation.

I feel strongly that the sisters need to get play education. They believe, of course, in physical education, but too often all they get is the formal, stilted gymnastics. How are we going to handle that particular problem? I might say they have physical education and for the summer session we have a graduate of Columbia who is to give a course in recreational activities. This is an elective course, and where six or seven hundred sisters are in attendance during the summer school there at Washington, I never know how many are going to take it, but I am hoping there may be many.

Chairman:

Now in regard to the two-hour course Miss Spencer had in mind, two hours a week for one year, dealing with the subject-matter and methods in health education—I would say that I combined the two in such a course. I gave the material to teachers in a two-hour session, following that by a discussion on methods of teaching that particular set of material.

Miss Rood:

Correlating methods with subject-matter

I speak of teaching undergraduates, but the principles apply to teachers in service also. We feel we had the best results by correlating the methods with the subject-matter, at the time the subject-matter was foremost in the student's mind; and by constantly bringing before the teachers, "This is the thing you are going to be responsible for (naming different activities); how are you going to do it?" They thus have constantly in mind during the development of the entire course of study the fact that the information is given to them because they are going to hand it over to the children, and that their main purpose is to teach children how to use it.

Incidentally, it was necessary for us to give our students a great deal of subject-matter, because of the very small amount of work that they had had previous to taking the course. These students were all high school graduates, with no teaching experience before they came to us. I think the first year the method and subject-matter stood more by themselves, and we found that we did not get as good results in the practical field or in the observation field as we did by closely tying up the methods of teaching, always, to the particular subject at the time it was being developed in the class.

Chairman:

It is a huge asset to get the experience of others. Has any one else had any experience?

Dr. Andress:

It seems to me if I were giving a course of that kind I should try first of all to put down on paper what my practical objectives were, stating them in a very clear and terse fashion. Then

I should consider what theoretical background, scientific background, would be necessary in order that those goals might be understood. That would guide me in the selection of the subject-matter and in each case, the applications I wanted to teach.

I am under the impression that one could cover a much wider field in that way, and do it more intensively and thoroughly than one could to divide the work into two parts.

Miss Erna Proctor, Director of Health Education, Child Health Demonstration, Athens, Georgia:

I want to tell Dr. McCarthy that the University of Georgia, located at Athens, is to have a course in parent training next year—thanks to assistance from the Laura Spelman Fund of the Rockefeller Foundation. This Foundation has granted to the State College of Agriculture, University of Georgia, a sum of money to be expended over a three-year period in developing courses in training for parenthood and in the organization of child study groups throughout the state. Miss Martha McAlpin is now at Teachers' College preparing to carry on this work. We are hoping that Athens and the Demonstration will derive great benefit from Miss McAlpin's work.

Child Health Demonstration, Athens, Georgia

The Child Health Demonstration was organized in Athens last January. As soon as I assumed the duties of health educator I began studying the school system, the course of study and the methods of the teachers. An attempt was made to acquaint myself with the problems of the schools and the teachers, in order that the course of study in health education might be developed. From this study it seemed that the first thing needed was to show the teachers that the Demonstration was not going to add a load to their already crowded curriculum, but that it hoped to help them utilize the opportunities it presented for the development of a program of health education.

During my study I always asked the question: Is this the thing to which my health education program may be tied? Does it afford an opportunity for teaching children the value of health? Through it can we make the information given function in the life of the child? Beginning with the first grade and running through the seventh there was a course in science which included the hygiene then being taught. In the first three grades

science took the form of nature study. These daily lessons in nature study would afford a nucleus around which we might develop our program. In the upper grades texts were being used in the usual way. This gave a basis for work in these grades.

Thus our course developed. I might go back a little to say that the year we went to Athens the schools were selling lunches of wieners, rolls and milk chocolates. To change this was my next job. The School Board had no money with which to buy supplementary books. As a result each school was vying with the other in raising money for library purposes. The things off which they could make the greatest profit were wieners, rolls and milk chocolate. I realized antagonism would develop if I personally assumed the responsibility of putting a ban on the sale of these things. We had on the Board of Education a Health Education Committee of which a doctor was chairman. He was opposed to the prevailing type of school lunch, but since no one had raised any objections to it he had not bothered about attempting to change the custom. Through his aroused interest and influence the Board passed a rule governing types of lunches to be sold to school children. The health educator was asked to supply a list of foods suitable for mid-morning lunches. Milk in one-half pint bottles was the most feasible method of supplying lunches in a school system where there were no facilities for serving. So we began the sale of milk and crackers. The children pay a small sum weekly for which they receive a half pint of milk with an unsweetened cracker.

Board of Education and school lunches

Beginning in September, classroom inspection for contagion and other signs of illness and for cleanliness was instituted.

The school program began with the stressing of the importance of milk in the diet. We issued a bulletin taking up aims and objectives, but primarily covering the essentials of nutrition. In addition we gave the teachers subject-matter concerning milk as a food for children together with types of illustrative material and methods of presentation. This method was followed with each topic taken up during the year.

In the first three grades stress was laid upon milk for young animals and for growing children. In the fourth and fifth grades emphasis was placed upon sources and distribution of milk, what cows eat in order to produce milk and what it is that makes milk

good for children. Rest as a tool for producing growth in children was emphasized at the same time.

Then came the harvest time and the nature study through all the grades centered around this season. In the health work the children took up the question of cereals as building material. Their plays and games all centered around harvest festivals. As an illustration of the type of correlation developed, a first-grade teacher dramatized the whole process of grain production and preparation for use. The children in play prepared the soil, sowed the grain, harvested it and took it to the mill. They made windmills and ground the grain, being sure that they did not remove the outer covering for they had found that children should have the whole kernel rather than highly polished products. The milk study was reviewed when it developed that cereals needed to be supplemented by milk.

Harvest time and health

By this time the school health examinations were well under way and we knew the height-weight conditions of our children. Methods were developed for giving the children this information and for securing their interest in it. They must understand where they stood with relation to average children of their age group all over the country. If they did not approach that average they could establish such habits as would help them improve their condition.

In November and December the children were classified into white, blue and red groups, according to their variation from the average, a system with which many of you are familiar. The teachers carried on the monthly weighing of children under the direction of the Demonstration nurses. Under my instruction methods were developed for making this vivid to the children.

By January we knew the physical handicaps of most of the children. Handicaps as hindrances to growth of children became the next topic. These must be removed if the children were to grow as children should.

As spring came on, the science centered around spring and what it means to the world of plants and animals. We attempted to tie this subject up with what spring should mean to children: that at this season warm rains come, the sun shines brighter and warmer and all nature begins to awaken. Fresh air, sunshine

and rest were studied in their relation to health in nature and children. The seeds and the buds of trees all resting during the winter waken fresh and happy in the spring.

Spring time and health

The spring also brings to us fresh vegetables and we began to encourage the cultivation of home gardens. Work with our colored schools along this line progressed farther than with the white schools. We realized that it was almost impossible for many of our negro children to buy fresh vegetables so they were encouraged to cultivate a small plot of ground in their back yards. Seed boxes were made at school and plants grown there were taken home for the gardens. The relation of vegetables to growth in children formed the basis of classroom discussion at this time. They studied also the growth needs of seeds.

In April we took up fruits in relation to growth in children. Throughout the year hand work illustrated the current topics.

This is a sketch of what we have attempted to do in developing a course of study for the children and in training teachers who are already in service. The year's work presented subject-matter and methods of presentation simultaneously.

Chairman:

That work at the University of Georgia mentioned by Miss Proctor suggests that universities, in addition to home-study courses, ought to have institutes of education so that they could provide courses for teachers of health education in the rural districts. The New York University, for instance, is willing to give courses anywhere in the country, providing a sufficiently large group can assemble for the purpose. This university will arrange for some qualified instructor in the immediate neighborhood, in the state, perhaps, to go to the group and conduct the course. I don't see why a great many universities shouldn't do it, particularly in this middle west where the distances are much greater than they are in the east.

One interesting matter that Miss Proctor mentioned in describing her supervisory program was the seasonal arrangement of the subject-matter. It is so wholesome to find that there is a logical plan on which the course is being built up, that you don't simply say, "This week I will teach clothing, next week hair, next week skin, next week teeth," and so forth.

Professor Turner, will you tell us what you are doing at the Massachusetts Institute of Technology, in the way of health education courses for teachers in service?

Professor Turner:

At the Institute of Technology we have a one-year program in health education to which we have admitted college graduates who had a major in this field, graduates of high-grade normal schools with satisfactory teaching experience, public health nurses with school experience, and specialists in physical education or nutrition—allowing each student credit for the training which she has had. Through the undergraduate and graduate courses in public health at Technology and through courses in the School of Education at Harvard University or Boston University, we have given her a program which would so balance her previous training that she would have the fundamental bases in biology and public health, education and educational method, and physical activities. This program is not for the general teacher but the person who is becoming a specialist in this field.

Technology gives also a summer course for the classroom teacher in service. Our experiment in Malden has now become a community experiment. It is planned to offer, to our active Malden teachers, a course in health education for which we can give academic credit. This will be given at a convenient time and place and should enable our program to move forward more rapidly in the individual classroom. It seems to me that extension courses which will give the teacher a perspective and the ability to cooperate in the program in her schools, are both important and practicable.

Experimental schools

The development of an experimental school in one or more demonstration centers is one of the best methods of putting a health education program into the community. If you are developing teachers in health education it is almost essential to have a place where you can let them see the thing going on. Several cities are considering at the present time the organization of an experiment, somewhat like that which we have been conducting in Malden, as a means of introducing the general program. It gives you this advantage: you do not have to say to the school department, "Here is a scheme of mine which I feel

sure will work if you do your part." You can say to the school department, "Here is a health education program, the standards of which are set forth by national bodies and conferences. Let us test it in our own schools and see whether it has the values claimed for it. If it does, we want it; if it doesn't we want to know why." It relieves you of assuming a primary responsibility and makes it possible for you to develop a program which as we have demonstrated, will sell itself and serve as a nucleus for the training of the other people in your community.

I do think that more training is needed in the scientific reasons which underlie the habits of living. We need to watch our program to see that it does not fail because of the lack of a scientific basis. It is not necessary to forego the scientific basis in order to carry the motivation that we want. My suggestion is this: First, a demonstration experiment which forms a visiting center in which your teachers can observe health education in operation; second, an extension course presenting both the scientific and educational bases of health education, carrying academic credit and given at a time and place convenient to the teacher.

Extension courses

Miss Rood:

I have been asked to give a short survey of the work at Mansfield, covering the development over a period of about three and a half years.

When the Demonstration first came to Mansfield, Miss Beard then in charge of health education, completed practically all the beginning work, translating to the teachers of the county, village and city the objectives of the health education work. This part, therefore, was really done when I came, although we still found in the minds of the teachers a haziness as to the objectives. The idea of translating health into the actual lives of the children in terms of activities was something that was not readily understood. We had very few normal graduates among our teachers and the project method was something very new to our people. In fact, they are just now beginning to become interested in teaching by means of activities of children.

Our first year's program was based exclusively upon the Rules of the Game. It was not possible, with such a large terri-

tory, to provide much definite material for the teachers. The teachers were requested to keep samples of the children's work, however, in a year book. At the end of the year we then had an opportunity of studying the type of thing that the teachers considered worth while saving in a year book. At the end of the first year we found that these books were mostly scrapbooks, pictures cut from magazines with one sentence or a slogan written below, which to them was the thing representative of their health work.

The second year the teachers in Mansfield met to consider enlarging upon the topics of that first year, based on the health habits that they felt their children should know. The second year we worked along the line of definite topics in every grade. It meant, however, that several different topics were run at the same time. With only one director and with very small library facilities, it was impossible to get to these teachers the material they needed to help them. We found that only in outstanding cases was a great deal accomplished that was reflected in the lives of the children.

At the end of the second year the teachers realized that there was a need for definite help along these lines. Suggestive outlines were needed for the teachers to use in connection with the development of various topics. Particularly was help needed in showing the teachers how they could correlate with the existing course of study and with the books that they had right at hand. There was no use in recommending outside reading which it was impossible to obtain since the library could not increase the number of health books without public demand. Health books would come after the public demanded those books be put into the library.

Plan of work unifying aims

We also found a growing need for some definite plan of work which would unify our aims. The nutrition worker, the nurse, the health education director, teachers and principals had no definite plan of what was to be accomplished in the health work. There was a need of some precise statement of what we wanted to do for the children.

There was also a great need for a definite aim that children would understand and would be enthusiastic about attaining. We needed also some means for unifying the method of inspec-

tion in the schools. That was the beginning of the county-wide project of the morning health inspection, which would combine the activity and the interest of the children with the activity of the teacher and which would also be instrumental in cutting down the amount of contagion in the schools.

It was decided, in order to make this help acceptable to the teachers, to concentrate on just the minimum essentials in the health program, selecting the topics that would bring the greatest number of practical helps to the children. That is why the monthly health topics were chosen, and why concentrated effort was placed upon the development of these in all the schools in the county.

I think from the standpoint of results in the lives of the children that we have had more from this development of the work than we had by following a variety of topics in the various grades of the city and of the county.

Factors influencing health education programs

We use these monthly topics, having continually in mind the following factors which influence the health education program: (1) The spirit of the teacher and her example in the schoolroom. (2) The environment of the children being far from ideal, we must work toward a better environment in the school buildings. Sanitation particularly needs a great deal of attention still. (3) The practices and the activities of the school should always consider the health program. Everything that is done in the school is teaching the child something in the way of health. (4) Direct correlations are important but may be overdone, and should be carried very carefully in the school program. The incidental correlations are most important because of the association that they have in the child's mind with the various subjects in the curriculum. (5) We have made the direct health teaching period very short. Our direct teaching period for our upper grades is sixty minutes a week, for the intermediate grades forty-five minutes a week, and for the primary thirty minutes a week. We purposely keep that period very short in order to encourage the teachers to see the opportunities for correlations.

At the close of this year we feel the need of introducing other topics into the Mansfield city program. In order to do

this a set of problems was formulated, based upon this year's program, to be presented before the teachers' group.

The following are examples. "What are the essential things that the teachers consider important in the Mansfield program? Shall we continue the morning health inspection? Would you like to have the monthly health topics continued? If not, what changes would you like to have made?"

These questions and others were formulated and sent to the principal of every school building in Mansfield, with the request that a building meeting be held at which the teachers be encouraged to express freely opinions about what they want and what they do not want.

Each of these meetings selected a group of four representatives consisting of the principal, a grammar grade, an intermediate and a primary teacher, to go to a general meeting, prepared to discuss these problems. They voted to abandon some of the features of the health program and to continue to carry on other work. It was decided unanimously to continue the morning inspection in the school and also the monthly health topics. Extra help was asked for the upper grades and topics of local importance in Mansfield were added. For instance, we had several cases of rabies causing the destruction of very valuable stock in the farming community. The question was asked, "Why shouldn't rabies be considered a very vital question for seventh and eighth grade children to know something more about?" We also had an epidemic of smallpox, and it was decided by the teachers that current events as they had happened in Mansfield this year, should be made the basis of a part of the school program in the seventh and eighth grades. The preparation of material was left to the medical director and to the director of health education, so that the teachers might have definite health material on the development of these topics for the discussions.

Survey of textbooks

One of the things that I think we want to work on next year, is a survey of textbooks in reading, civics, agriculture, physiology and biology, page by page, for the incidental correlations that occur in these courses of study, putting the results in form for reference to help teachers in seeing how they can use such

correlations in a course of study for the development of the health program.

Chairman:

Thank you. Miss Rood told me the other evening that before the Health Demonstration was opened in Mansfield, the farmers throughout the country region used to register their stock in the town halls; but that since the Health Demonstration has been going on among the people down there they are registering their Blue Ribbon children and they take as much interest in their children's registration as they do in their high-grade stock.

Registering children

We know, historically, that the Department of Agriculture was organized before the Children's Bureau and that is apparently the sequence that has been followed out in Mansfield as in other places.

Dr. G. Loutrell Timanus, Supervisor of Health Service, Playground Athletic League, Baltimore, Maryland:

I had the pleasure last year of working with Miss Anne Raymond. At that time we were working in Allegany County, a very mountainous county. The schools are very poor and they had never had any health instruction before.

I have just dotted down a few of the things Miss Raymond did in order to accomplish that purpose. First, she went to each school and tried to interest the children through her personality and she had lots of that. She could go into a classroom and after a few little talks and probably a little story about the health rules, she could get little children to do almost anything that she wished. Then, while she was there, she organized health clubs in the schools and she encouraged the teacher to try to work in this health instruction as best she could. She would give the teachers a little talk telling them how to combine health work with history, geography, physiology or with the other studies. She tried to encourage every school at the end of the month to write out a little synopsis of what they had done during that month. Then all the teachers came together in Cumberland, which is the seat of that county, and there they talked over what they had done individually during that month. She also distributed a little article or a little game that could be played

in the school during the following month, and also a story that could be told the children, a little health story.

She got the Board of Education to set aside a certain fund for a library and she selected the books that she thought most valuable for those teachers, and every month each teacher would probably take home a different book. In that way the teachers had the opportunity of getting material. The medical work was done by the public health nurse and the conditions were followed up by the nurse.

Mr. August Maue, County Superintendent of Schools, Joliet, Illinois:

May I ask for a bit of sympathy for the teachers? I am a county superintendent of schools working mostly with rural teachers. Most of you are directing teachers, and you are asking them to do things that the parents in most cases think is nonsense. The doctors, too, are often opposed to it and fighting it. You are asking the teachers to take on all this extra work when they are already overloaded and you are besides asking them to do all that for very small wages. I am asking you that you have sympathy for the teachers in your promotional work.

Chairman:

I don't know that we ought to show sympathy for the teachers in asking them to take over this work, because I think we can show them that it is a really good investment, that the investment will yield something better than the current rate of interest, for the reason that if they can improve these children in any one sphere, then they will be able to turn out better classroom work. The teacher's job will then be easier, and the whole school process will go along much more simply.

Health education a good investment

I don't believe that the amount of work is the prime consideration with most teachers. I believe they are eager to do something. I believe we can put this on a business basis, and show that it yields good results. It the doctors object to it I am sorry for them. But I can speak for the New York doctors, and they are glad to get all you can give them in the way of health education. They feel that it is a very excellent movement. I know that none of us care whether we are depriving ourselves

Doctor's attitude toward health education

of patients or not but hope that health education work will be organized so that the best will have to come forth.

Miss Phelan:

I would like to say for the teachers in Athens that they have been highly pleased with the progress they themselves have made. One of them was teaching two sessions a day. She put herself on the schedule that she tried to get her children to adopt, and she gained ten pounds. Before the end of the first semester, she said she would never cease to be thankful for the health work done in her school. I have other teachers who have drunk milk with their children at the mid-morning hour, and they themselves report much progress and freedom from fatigue. When the teachers progress with the children you do not have trouble and opposition.

Mr. Maue:

Mr. Chairman, I feel as though I ought to defend my position. In a babies' contest in our city, there was not a single doctor in favor of it, and we couldn't get teachers and doctors to be the judges and do the inspecting. We couldn't get anybody excepting the young fellows just out of school, just starting, and the second year we couldn't get them. Why the doctors take this stand I don't know. That surely was the best education that ever came to those mothers, but the doctors fought it, and so the promoters of the contest brought in two county nurses that we had in the rural schools, to do the inspecting and testing.

Question:

May I ask how they met the situation in Richland County?

Miss Rood:

Most of the school examination work has been done by the doctors in the Demonstration, with such help from the local physicians as would volunteer to help. I would say perhaps that last year there has been less volunteer help from the doctors than there was two years ago, and that the examinations the third year will be conducted principally by the Demonstration physician at the schools.

Miss Kathryn L. Jenson, Director of Health Education, Seventh Day Adventist Demonstration, Washington, D.C.:

In the course in health education work, especially in the case of teachers and those who have had no foundation work in sociology, was there any study given on methods of approach?

Miss Rood:

The bulletins sent out dealt with the necessary subject-matter and suggestions for devices and methods of putting it over with the children, but the general approach to the health problems was discussed at the teachers' institutes and was followed up individually in small group conferences at two meetings during the year.

Dr. Timanus:

I would like to refer again further to that baby contest. If those were prize contests you would have to agree with the doctors in not wanting to handle that situation, since it would embitter the mothers. Probably the doctors' response would have been different, if the contests had been conducted as we tried to hold them in Baltimore, where we called the project a "Baby Health Day," and babies were examined with no prizes, only receiving the proper certificate of health. If a child rates up to a certain standard, then you send its mother a certificate with the signature of the physicians and the head of the organization conducting the examination. She prizes that.

Dr. Fred Moore, Director, Health Department, Public Schools, Des Moines, Iowa:

Des Moines, Iowa

I should like to say just a word in regard to the doctors' situation. I have some feeling of sympathy for both sides. Since I spend most of my time practicing medicine, I appreciate something of the doctors' point of view, and since I have been trying to develop a health organization in the public schools and promote some work in health education I appreciate the reaction which has been indicated here by the gentleman from Illinois. That is a very real problem.

Those of you who are in a community where you have the co-

operation of your medical profession may well congratulate yourselves.

Now I do not know anything about the situation where any of you live, but it just strikes me that possibly in the initiation of your work, there was a lack of appreciation of just the type of ethics existing in the medical profession there, or perhaps there was some lack of appreciation of the general social relationship of all the elements in the community. If someone with some deficiency of understanding should come into a community to develop this work, and perhaps go at it from the wrong angle, as a result, a prejudice is established which it is impossible to overcome, except by setting everything else aside and making a survey of the whole situation, just the same as we are trying to do here with this health education. You have got to take a complete survey of the situation as it exists and see what the elements of dissatisfaction are.

You have got to take into consideration that you must have the cooperation of the medical profession and you may have to make some sacrifices to get it. It seems to me that you might get the cooperation of the medical profession if someone could get some of those men together, and induce them to help you make a health survey of your community. Get them agreed upon some things you need. Then set about with them to accomplish those particular things. You may not be able to do all the things you would like right now. You may have to postpone some of them for a year or two, but by adding a little at a time and accepting the things which you can get your doctors to agree upon as being desirable, you may be able to accomplish very satisfactory results. What may seem the lesser things to you, may be the important things in getting a permanent health program under way.

Getting the cooperation of the medical profession

Dr. Andress:

As Dr. Moore has said, the thing to do is to work with your physicians, to get their advice, to set them to doing things, and persuade them to help us.

I would like to tell you briefly about some courses for teachers and leaders in the Boston University, given last year

with the cooperation of physicians. In fact one of these courses we have had for three years.

Evening Courses

The evening courses have been prepared and presented with the view of aiding those in the work to keep up with the latest training and knowledge in health. The first course is a course in mental hygiene, of fifteen lectures on "Understanding the Child and His Needs." The second course is a course on "The Newer Knowledge of the Physical Health of Children."

A great many people will turn out for such courses. In these courses I give some of the lectures twice. At least the first lecture and the last one. A physician who is an authority on health work talks for about fifty minutes, then we have a question period of twenty or twenty-five minutes.

I should like to give briefly some of the subjects in these courses, for example, "Understanding the Child's Mind," "Understanding the Child as a Whole," "Importance of the Pre-School Years," "Mental Hygiene in the Home," "Mental Hygiene for Parents," "Intellectual and Emotional Training of the Child," "Mental Hygiene of Schoolroom," "The Physical Needs of Children," "Adolescent Struggles at Adjustment."

I am not going to read this complete list, but I want to say that in this group I have been able to get the most distinguished men of Boston. They have been glad to serve. They haven't even asked me how much they were going to get out of it, and I have told them we would pay them as much as we could. At the end of the course we send them a check for whatever it happens to be. Sometimes it has been fifteen dollars, sometimes twenty-five, never more than twenty-five, and nobody has ever refused to serve unless he happened to be out of the city.

We have 150 teachers in this course. They are required to do some reading, to hand in their lecture notes, and they receive regular university credit. The cost of the course is ten dollars per year, single admissions one dollar. It has been highly gratifying that the course has been attended not only by teachers but by parents as well. Many of you in various cities would be able to work out some such program as this for your teachers. You need to be careful to coordinate the work and give the speaker some kind of an outline from which to speak.

Isn't it possible for us who come from the larger cities to

organize this kind of work? Of course, Boston is a large city with a great many schools and specialists, but isn't it possible for you in some of the smaller cities to organize a course on somewhat the same basis?

Miss Oppen:

Going back to the further training of teachers in service, I am glad to tell you very briefly how we met a rather typical situation in a medium sized city, because I think it is a situation which confronts quite a number of you.

As one of the follow-up results of the teacher scholarship contest which the American Child Health Association inaugurated two years ago and which resulted in fifty-two cities coming into the contest, we received a number of requests from many of these cities for further help in increasing the interest of the teachers in health education and in making teachers more efficient in their work of health education.

East Orange, New Jersey

One of these cities was East Orange. The superintendent of schools, Dr. Scott, desired to have the scholarship work and the interest of the teachers go on and reach a larger number of teachers than the rather small group who had entered the contest, and he came to us with the request for a course of lectures which might reach all of the teachers in service in East Orange.

We were not particularly interested in a simple lecture course to the teachers of East Orange. We were, however, much interested in helping East Orange to develop a complete health program of which, of course, the teacher training work, including lectures, was a part. We also wanted to have a laboratory near New York in which we could test out some of our theories, and some of the principles suggested in the report of the Joint Committee of the National Education Association and the American Medical Association. We therefore accepted the invitation of Dr. Scott, and it was agreed that I should spend not more than two days a week for a period of perhaps three or four months, in East Orange, to see what could be done in helping East Orange to develop this complete health program.

I take it that you will be interested in our point of attack, and our method of procedure, so I shall try to rehearse for you

the process of reasoning which we went through in making our beginning.

Our problem presented two alternatives, namely: Shall we attempt at the very outset, to initiate a city-wide activity, spreading ourselves very thin at this initial stage, or shall we rather undertake to do a small and intensive piece of work with a limited number of teachers in the beginning, and try to create an attitude and a type of activity which will be contagious among the teachers of the city, and which will proceed in years to come with a vitality inherent in itself?

Having made the latter decision, the next question was: What shall be the personnel of that small group and how shall it be selected? One thing that was above all else important was that the attitude of the group should be right. We knew that Dr. Scott, the superintendent of schools, was completely co-operative, that he had entire confidence in our leadership, and that he would accept our suggestions.

Personnel of group at East Orange

Since our objective was not simply to train a group of teachers for more effective work, but rather to institute a complete health program which would necessitate community support, and probably financial support on the part of the school board, we selected, after some discussion, as the first person to be invited to become a member of our group, a certain member of the school board, a woman who is also an influential club woman.

A health program in the schools, as you know, doesn't go very much beyond the willingness of the school principals to hold the teachers responsible for it, and to appreciate the energy and the thought that the teachers put into it. Therefore, the next members to be invited were two influential principals of school buildings in the city. They were carefully selected because of their experience, because of the confidence with which every one in the school system looked to them, and also because of their already-existent interest in health.

Then we knew that if the health program was really to permeate every hour of the school day, we couldn't get very far unless the supervisors of physical education and home economics came into the group, and so we invited them to become members, and we invited also a teacher from each of the eight grades and

kindergarten. Each of these individuals was chosen after much discussion. I consider that the strength of our plan lies in the care with which we selected our members. The two school physicians and the supervisor of nurses, both under the board of education, were, of course, invited at the very outset.

We wished to keep this thing on a basis of an honorable privilege, so that when the teachers and the principals and the supervisors, members of the medical staff and the school board and the superintendent of schools got together, we had a group filled with expectancy, feeling, "Now what are we going to do? We do not exactly understand what the next step is to be, but it must be a very important and worthwhile thing."

We met in the board room, a very dignified, substantial room in the school administration building, and the very atmosphere of the room contributed to our sense of dignity and responsibility. Seated around the great oak table, many of us for the first time realized the complexity of the factors involved in a complete health program, and the fundamental necessity for real team work on the part of teachers, supervisors, principals, superintendent and school board.

Development of plan

In our development of health education programs, along with the development of the right attitude, as the very first step, and the development of a balanced sense of relative values, as a second, the third important ingredient of success must be courage, because after all the work in each community is experimental in its nature and is different from the work in any other community. Every project is a project the end of which we can guess, but cannot foresee with complete definiteness, and so it requires real faith and hope to take the first step, and to gather together in one group the heterogeneous factors involved.

We had first of all three meetings of this group as a whole. After that we divided up into four section meetings and each section got to work on a task of its own.

In our meeting of the group as a whole, we discussed first the objectives of education as such, and we referred to health as one of the primary objectives in education. That gave perspective. Afterwards there was a general consideration of the fundamental principles of health education. Then we split up into our smaller groups, and formed three groups of grade

teachers (primary, intermediate and upper grades) and one committee on administration.

The next step was for each group to define its specific project. The project for the teachers was the development of a course of study for the primary, intermediate and upper grades. Of course, no course of study is outlined satisfactorily in four months, but we did get as a result of the most intense group activity of these teachers, the three sections of a report which constitute the backbone of a course of study. These teachers had analyzed the school data on each one of the grade levels to see what opportunities there were in the present course of study for both direct and correlated health lessons.

Our administrative group prepared a report on administration which recommended additional medical service, a helping teacher or supervisor in health education, etc. All of this was by way of laying the groundwork. Next year we shall begin with the course of study which this small group of teachers initiated. We hope to have every school teacher next year contributing, analyzing, evaluating and criticizing the course of study as produced thus far, amplifying it, and making it more workable. Next year we hope to have a health teacher who will work under my supervision, and who will conduct certain group meetings and individual conferences. In addition to that, we have in mind a lecture program for extending help to all teachers and increasing their sum total of health knowledge. The important thing, I believe, is the method of attack, in which the creation of right attitude is considered as the most important single thing to build on in our school health program.

Plan for 1926

Miss Georgie B. Collins, Director of Health Education, School Department, Malden, Massachusetts:

I should like to ask Miss Oppen if the Department of Health in East Orange had any part in that program.

Miss Oppen:

As a matter of strategy at the very first meeting of the group as a whole, we invited the head of the Health Department to come in as a guest. In that first meeting I neglected to say

that we presented a survey of the health situation in East Orange as a whole, based on the Report of the Survey of 86 Cities, made by the Research Department of the American Child Health Association. Since we knew that we would have to work very closely with that commissioner of health later on, we invited him to come to that first meeting as a guest.

Miss Collins:

Experimental health teaching in Malden, Massachusetts

My work in Malden has been done under the direction of Professor Turner of the Massachusetts Institute of Technology. We have been carrying on there a piece of experimental health teaching work during the past four years. It has been a small, intensive piece of work which has gradually been spreading out, and next year we expect our little experiment to become a city-wide program. We went in with the understanding that I should work, not as a supervisor through the city, not as a personal organizer or demonstrator, but as a special health teacher. The School Department gave me the courtesy of allowing me to work in classrooms half an hour a week with each class, although I had no authority to require anything from the teacher except what I was able to get by winning her good will.

Of course the teachers were expected to attend to matters like clerical work, records of weight, duplicate records, etc., but I was not expected to require any amount of teaching from them. We began by holding nine classes, and at the end of the first half year this increased to eighteen classes; at the beginning of the next school year we undertook twenty-eight classes, and that number we have kept up to the present time.

Professor Turner had in mind two objectives. The first was to make a statistical study of growth records of the children with whom we were doing the special health teaching. We kept at the same time records on a control group in the city, so that the studies might really be of some value, three or four people reading them and interpreting them. The second objective was to experiment with subject-matter and methods.

At first I did all the teaching because of the nature of the experiment and the nature of our arrangement with Mr. Marshall, the superintendent of schools. At the end of the second year we asked how many teachers would like to carry on their

own health program under my supervision. They were still quite timid about it; one of the principals said, "They do not like to set up their health teaching against yours, but they are interested." We did have three brave souls who set out to do their own teaching that year. At the end of the next year there were still a few more, and during this past school year all the teachers have been required to assume the responsibility of their health work under my supervision.

Some of you may wonder how the teachers like that change. Most of them did like it. Many teachers have said to me, "I thought I would not like the change; I thought I would rather have you coming in every week, but, really, I find I am much more interested in the work when I am doing it myself."

Reasonable requirements for teachers in service

I think in regard to teachers in service, we must be reasonable as to what we require. Teachers have a great many other subjects besides health, and those who have been teaching fifteen or twenty or twenty-five years usually won't take an extension course to secure informational background and present-day ideals in health education. If we require too much work in the subject-matter of health we place a burden upon our teachers which they will find hard to meet. We can, however, interest our teachers to work for health improvement among their children. Health teaching adds to the joy and satisfaction of classroom work.

The way in which we train our teachers in Malden has been rather after the "Topsy" fashion; they have "grown up" in it. They do the work because they have become interested in it. We haven't had any courses for our teachers, because our work grew up in a different way, but a course is to be given next year. We have had a good deal of exchange of work among the teachers from one building to another. I have brought to the teachers as much helpful material as I could. I feel that with teachers in service who have little time to give and who have no inclination for digging into new subjects, we must be very definite in what we give. We must give material which teachers can take and actually use.

As to courses of study, I feel that we, as specialists, should guide our teachers to work out their own programs. When we get groups of teachers working on courses of study, we shall

have courses which fit the needs of the children and which the teachers will use. Most courses of study have been made by people who sit at office desks, in universities, or state departments. Such people are too far from the children.

In making up bibliographies and sources of reference, why are we, who are specialists, afraid to pick out a limited number of good references to give to the teacher? She hasn't opportunity to form a judgment of her own upon a large number of references. It seems to me that one of the crying needs today is that our bibliographies and our lists of references should be more definite. If we make them too inclusive, the teacher simply does not use them.

In the development of methods, I think we, as specialists, ought to have the very highest ideals, but I feel that in the work with teachers in service, we need to recognize that each teacher must be permitted to take her natural course, to a large extent. We think of each child as an individual, we can't treat him as if he were a machine. Isn't the same thing true of the teacher, too? Each teacher is an individual and has her own ideas as to ways of doing things.

I want to tell you just one instance of my own experience on that. I had one teacher whose cooperation I didn't get. Finally, I said to myself, "I will let her alone. She hates this business of doing handwork, she loathes dramatization, and thoroughly dislikes the practice of systematic follow-up. I will let her go her own pace." I left her to her own devices, and that was the solution! If I were to take you into her room, you would not find one sign of health work except the children. She is doing her work with her children in her own way. I don't know exactly how she does it, but she creates an atmosphere in which each child is working for health. If she knows that a child isn't getting enough sleep, she talks to him "on the side" and keeps in touch with him until he has more sleep. She takes the youngster who hasn't been to the dentist, and persuades him to go. I consider that she is doing exceptionally good health work.

One teacher's way

Professor Turner has just published in the May number of the American Journal of Public Health a report of our work. I carried copies to each of my schools, but no teacher has talked about the report to me. It seems to me one indication that most

teachers in service at the present time are not particularly interested in the research side of education. They are not particularly interested in the tests which we apply to see whether health work is useful or not. When they see that Mary's cheeks are more rosy, that Johnnie's eyes are brighter, that Jimmie has improved in posture and that Tommy is doing better work in school, they see the results of health teaching. That is the thing which really counts with the teacher.

I feel that we, as specialists, must try to understand the way the individual teacher reacts to the strange, new requirements which we place upon her. I would make a plea for the teacher in service, that she receive sympathetic guidance as an individual. We can't "bring her up" as we are bringing up our student teachers. Let us try to help her to develop her health teaching along the lines she would naturally be inclined to take.

Miss Barker:

I found the same thing in my work in Oklahoma. Now in working with teachers to train them for health work, we used personal conferences, and group conferences, demonstration teaching done by the teachers themselves and by a supervisor, with room visits where there was demonstration teaching done, and propaganda work to give the teacher her perspective on the subject. The latter included the interesting of the whole community through newspaper publicity and through turning the community's attention to the matter of contributing in outside lessons.

Giving the teacher perspective

Summary of Section II, Topic 4

TRAINING IN HEALTH EDUCATION FOR TEACHERS IN SERVICE

Organization of Courses

IT was made evident from the discussion that there is no standard type of organization of courses for teachers in service. Furthermore, it is desirable that this should be so in order that there may be developed definite types of courses to meet varying local situations involving scholastic attainment of

teachers, types of school administration, the varied courses of study in vogue and local community situations.

The organization of courses for teachers of health education should, in general, be built around the nature and needs of children physically, mentally and socially, and of the communities in which they live.

Means of Reaching Teachers in Service

At present there are several ways of meeting the needs of teachers in service. These include university extension courses, summer courses and courses in teachers' institutes. The courses vary in length, method and content, but the fact needs emphasis that with proper organization, more can be accomplished than is usually thought. As an example, the following is submitted as a successful example of such a course:

Nutrition Course for Teachers in Service

A sufficient knowledge of nutrition can be given in one thirty-hour course. Content: The fundamental requirements of human nutrition, including a scientific, but non-technical presentation of the energy, protein, mineral and vitamin requirements of the human body; and the simple facts of the physiology of digestion.

Definite application of these principles to the planning of diets for individuals, first for the members of the class and other adults and later for children of various ages.

The chief emphasis in this course should be upon subject-matter, but a small proportion of the time should be given to methods of adapting the information required to the work with children in schools.

Unless this course is preceded by general biology and physiology the time allowed should be greater.

Supervisors' Courses

Courses of study have also been arranged by supervisors of health education on special health matters to meet the needs of local groups. In the organization of these courses, the attitude, interest and vision of the teacher is of the utmost importance. Frequently these courses for teachers develop along project

method lines with emphasis on both subject-matter and method of presentation.

In a given case great success was reported with monthly bulletins containing information for the teacher as well as procedure for health teaching. The first year's bulletins were:

Morning inspection, including checking health habits and detection of communicable diseases.
Cleanliness: physical, mental and community.
Teeth, hygiene and care.
Foods.
Fresh air: physiologic use, need and the effect of poor and good ventilation.
Exercise and its benefits.
Correction of defects.
Choosing Blue Ribbon children.
Gathering materials for a traveling health exhibit.

Objectives

In many cases it may be found useful for the organizers of the latter type of course to be guided by the following objectives:

1. Amplification of the subject-matter background of teachers.
2. An understanding on the part of the teachers of the pedagogical principles involved in health teaching.
3. The application of these principles in actual classroom work under direction and observation. This direction may be provided by classroom visits, personal conferences and group conferences, between teachers on the one hand, and supervisors of health education, or helping teachers in health education on the other.

Health Surveys

Before introducing or reorganizing work in health education in any community, a survey is necessary as a basis for understanding the local situation with reference to such matters as the existing training of teachers, teaching standards, local factors already existant which might be utilized and correlated, organization of the school program, community needs and an understanding of the social and economic home situations. Administrators should realize the value of this preliminary survey and the necessity for allowing time as a preliminary step in a teacher education program.

In order that we may have a basis for judging the relative efficiency of different types of organization of subject-matter and procedure, it is necessary that as an initial step in any teacher-training project, a base line be scientifically ascertained from which progress may be measured. This base line should include the initial status of the children together with their environmental health conditions.

For studies, see Recommendations, Section on Teacher Training, Constructive Study, Nos. 3, 4, and 6.

Topic 5: METHODS IN TEACHER TRAINING FOR HEALTH EDUCATION

Chairman: Dr. Thomas D. Wood

Chairman:

AS we take up this problem of methods for the teacher, the first angle we approach it from, is what are the educational methods and principles as applied to health education, which should be possessed by teachers? And we would like to get, as we did on Monday from Professor Bobbitt, a start in the statement and interpretation of general principles of education, and then see how we can apply these to the special field in which we are interested. We are to hear this morning first from Miss Zirbes on this question.

Miss Laura Zirbes, Lecturer in Elementary Education, Investigator in Reading, Teachers College, Columbia University, New York City:

General educational principles applied to teaching health

I have taken most of my suggestions from the material that I give to my classes in methods in other subjects, assuming that if the educational principles are general they apply to health as well as to other aspects of education. In fact the first part of what I say was formulated yesterday with a class in the University of Chicago, in connection with the correction of language errors and the development of habits of correct language usage.

After all, the psychology of habit formation is constant. It does not depend as much on the nature of habit as on the psychological nature of the pupil in whom the habit is to be formed.

The first thing to do in applying psychology to habit formation is to investigate the learner's present status in the particular habits in question. That is the very first thing we do in arithmetic, in reading and in language, and we should do it in health. We should know in what stage of habit formation our pupils are before we begin the attack on habit formation, because the initiation of a habit is one matter and the breaking down of a wrong habit and substitution of another is still a different matter. The continuance and checking up on a habit already rather well formed is still another matter, and we cannot proceed unless we know the present state of the person's habits. That, of course, is rather complex, because individuals differ so much. In the same class the teacher must be conscious of individual differences, because there will be some children in whom a habit is formed, others in whom it must be initiated, and others in whom the necessity for breaking down a bad habit and substituting a correct habit is apparent.

Habits

That matter is also affected by differences of background and experience; that is, some habits cannot be formed or corrected without overcoming difficulties that are not within the immediate control of the school or the teacher. The school is handicapped by the very nature of things in that the teacher has the child for so small a portion of the time. For example, a great many of the speech habits which are supposed to be corrected or reformed, are exercised far more out of school than they are in school, and the same is true with health. Some of the habits that we wish to form, and some of the bad habits that we wish to break up, such as posture and eating habits, are exercised without school supervision under conditions not conducive to correct habit formation, far more than they are in the school. What is the school going to do to augment the effect of the little control period in the school and to counterbalance the effect of possible wrong practice or lack of practice outside the school?

In order to do that, we have to make our habit work scientifically efficient, highly efficient, and we must augment practice far more than we would if we had the children twenty-four hours a day. Another thing that we must do is to make the practice like the life situation, and refer to the life situation, because if we want the habits to operate in life we must make the connec-

tion. If we want the habits which we inculcate to function in life situations, we must be concerned with real life and its problems.

We must distribute practice psychologically. In almost any school subject teachers are apt to think that they can teach a thing and then expect the children to know it—that they can initiate a habit by a campaign or drive and that then it goes on functioning by itself. Psychologically that assumption is not safe. We must distribute the habit-forming practice psychologically so that when the habit begins to slide down hill there is something that jogs it back and puts it on the higher level. We can increase the effectiveness of the short time we do have by enlisting the conscious effort of the child in the formation of his own habits. That is, to put a child through paces as we would put an animal through paces will form a habit, but it will take many more repetitions than are necessary when the child's conscious effort cooperates in habit formation.

In initiating a habit we must increase the frequency of practice. We must use some medium, not necessarily drill, but some form of repetition which will start the habit out well. Away back in the time of William James that matter was brought to the attention of educators, and has since not been left out of account. When you are initiating any habit, get a good start; as James said, "Launch yourself well on a new habit."

Furthermore, habit formation must be specific. A general attack on health habits, on English habits, sleep habits, any habits, is not nearly as effective as a specific attack. For instance, to tell a child, "You speak very poor English. I wish you would correct your English," will not do much. But if you say, "I have found these errors which you will need to work upon, and I am going to watch to see how soon one is eradicated," makes the matter specific. Making it specific with the individual is another aspect of habit formation.

Positive methods

Another suggestion is to use positive methods. I was looking through some of the books in the display at the library the other day and was alarmed to find a whole list of things not to be done. Over in the margin of a little book was printed the phrase, "You should never ———." Then there were about fifteen endings like this—"cross the street in front of a street car; pick your teeth with a pin" and so on. Now, do you see

the possibility of negative suggestion? By remembering the phrase in the margin children will find what they are supposed to avoid. By forgetting that phrase the wrong suggestion will be secured. Very often we do worse than that. We expect to form positive habits by negative suggestion. We tell children what they must not do; we restrict and inhibit without substituting desirable positive practice and suggestion.

Another point should be emphasized. To make children conscious of progress, to make them aware that habit formation does something for them, show them the effects of their own efforts. There have been experiments in reading and spelling which show that children who are made aware of their progress advance much more rapidly. Why should we not generalize and say that the same thing is true with reference to health habits? If we make the matter the children's affair and let them make their own individual progress charts or other records, progress becomes a matter of interest and concern.

Satisfaction and dissatisfaction

Another important factor is to provide satisfaction and dissatisfaction. That is essential to health progress. Sometimes we use teacher approval as the sole satisfaction, and when the child changes teachers, what happens? The whole record falls, because there is no one to smile approval. We must be very careful to cultivate satisfactions that are inherent to the child's own health and welfare and that are real to him.

To summarize the whole matter, whenever we set up habit-forming practice, whenever we say this health work is supposed to result in habits, we should consider these psychological principles and apply them in our instruction. The teacher in training could have the same kind of practice and before she ever tackles the health habit forming situation she should know how to criticize her own technique. As a lead to improvement we might say to prospective teachers, "Here are the principles of habit formation and here is the health habit desired. How are you going to proceed?" Incidentally some suggestions for habit formation will be brought in by students which show how we are attracted by seemingly clever devices but often these devices lead us off on a tangent and do not secure habit formation at all, and we need to put teachers in possession of the criteria by means of which they can supervise their own habit formation.

This is quite a long story for habit formation, but I do not see that we can get habits sufficiently well formed in the small amount of available time, unless we are very serious in our consideration of the psychological principles that apply. That is, after all, our work—building response tendencies in the child—and unless we know how the child responds to our stimulus, we cannot hope for effects.

Building response tendencies

Now the matter of "knowledge" should be considered. That term is not as popular in elementary education as it used to be. We speak of information, facts and data more than knowledge. These terms seem to be more concrete and to suggest something which the children want to know rather than knowledge in the abstract.

The first thing to do in getting children to acquire knowledge is to select for their acquisition, facts which are of vital, immediate concern to them. That is, select health knowledge, facts or information on the basis of what concerns the child, not when he is twenty years older, but right now. I shall not proceed to give the reasons for this for I am sure you can easily supply them for yourselves. They are in contradiction to the cold-storage principle.

The next thing to do is to multiply concrete illustrations of principles until the generalizations can be based on the child's own experience. We often start the other way around. We say, "Now here is the knowledge." With the child we should say, "Here is the experience and here is an illustration. Here is what you saw. What do you draw from that?" That makes it possible for him to generalize and so make it a part of himself—an organization of his own experience instead of a rule or principle that is brought to bear from the outside and merely learned in isolation. This procedure is extremely important—I refer to the multiplication of concrete illustrations in experience and observation, and the tendency to lead the child to make generalizations. Sometimes we are impatient. We feel the need for a generalization long before the child does, and we want to teach it to him, but after all, it is more important that he get it by insight, that he, so to speak, be the discoverer of the generalization. There is an attitude resulting from that process

that never comes from the hand-me-down way of learning principles.

Next, we must relate facts in a medium of experience or activity. An encyclopedic list of facts cannot be permanently acquired. There is no hope that encyclopedic facts will stick or take form in the child's life. After all, health knowledge is for life's sake and not for the sake of "knowing a lot," and consequently we must organize facts in a medium of activity or experience. It is the child's purpose, design, activity, intent and interest, that tie facts together in a way which enables him to hold them and it is only as these facts are acquired in experience that we can hope for retention and recall. Things learned by doing are quite different from mere verbal matter handed to you by someone else or read in a book.

Next, we must give opportunity for the use of information and the application of knowledge to needs in regard to life situations. Until that step is met, the knowledge is buried in a single association. For instance, if you acquire knowledge concerning water in one connection and you do not bring it up and reapply it in another situation, it is lost sight of, instead of permeating your life and coming back on different occasions, ready for use in new situations. The best guarantee of the deferred use of knowledge is immediate use. The best way of making sure that the child will use information is to give him practice in using it before you expect him to use it by himself. That is, guided use is one step toward self-initiated use.

Immediate use of information

We must remember, and train teachers to remember, that knowledge is organized by the child's activity. A well-made outline is organization, but it isn't the child-organization of knowledge. The child making an outline which may be only half as good, is living an experience which has more effect psychologically; the child making a booklet in which he uses and applies his health knowledge is engaged in organization. This is one way of holding his mind to thinking the thing through and applying what he knows to some concrete form of activity.

Furthermore, broad associations are essential to broad functioning. If we want a fact to be related to many aspects of life, then we ourselves must build and plan for establishing broad

connections, and tie the fact in question to the individual's well-being in the school and in the home. Cleanliness, for instance, must be taken into all its connections, otherwise we have the condition that prevails in certain people's religious thinking, viz: Religion is made for Sunday and the church, and good will for the people who belong to the same church. The same kind of limitation is psychologically the outcome of narrowly associated health knowledge.

Favorable attitudes from satisfying experience

Now we have come to the matter of attitudes. Favorable attitudes accrue from satisfying experience. Attitudes are incidental to any experience and are the emotional aspect of the experience. You can't build controlling attitudes by having lessons in which you teach appreciation. You build favorable attitudes by providing satisfying accompaniments to experience. That is one of the values of dramatics. The child loves dramatics and whatever is tied up with dramatics has that emotional tone and shares his love. By tying the child's interest with the health activity, by connecting the things which the child loves with health, you are promoting the development of indispensable attitudes. Once in a while that seems a long way round, but it is very important to see that these emotional tones accompany health activities. The reason some people do not like to study about health is because all the attitudes are negative. We can actually build those wrong attitudes by having unsatisfactory emotional accompaniments instead of satisfactory. As long as we know that minds work in this way we may as well set about to make them work in the right direction.

There is another aspect that I should like to add to these essential considerations. From previous discussion it appears that you are placing emphasis on incidental references to health in connection with all school activities. The danger of the incidental approach is that certain aspects may be left out altogether. There is a psychology of incidental teaching. I do not mean to disapprove of it. I think since health is an aspect of the whole of life, it is indispensable that we put it into life where it really occurs, but we must remember that such incidental reference sometimes needs to be augmented. The teacher must be made conscious of the need to analyze the situation and say, "Now in this incidental situation I can make a contribution

to health knowledge or habit formation or attitudes," and then conduct herself and her work in line with the psychology which applies. Otherwise we are going to get very little from incidental teaching and that is likely to be superficial. The teacher must be conscious of the psychological nature of her stimulus and of the situation. It is not enough to say, "This is a health incident." It is essential to be more analytical and to say, "This is a place in which I can make a contribution toward health education. What knowledge, attitudes or habits are concerned? How shall I conduct myself to be effective as a guide?" We must proceed psychologically to increase the efficiency of guidance, to make it effective in the attainment of the particular outcome, and to utilize to the full the occasions in which health habits may be affected, health knowledge impressed, or positive health attitudes built.

Chairman:

The next contribution here will be by Miss Lerrigo.

Miss Lerrigo:

I have been asked to give a little of my experience with reference to the educational methods and principles that should be applied in health education. An interesting part of my experience has been analyzing the educational methods and principles and matter that teachers have actually employed.

The opportunity was given me and my associate, Miss Patton, of studying a number of sets of materials that had been sent in to the American Child Health Association. We were not criticizing so much as we were educating ourselves; trying to find out how we could evaluate materials with reference to certain educational principles.

We had ten sets of materials which were the result of classroom work. These came from various parts of the country. I think perhaps one of the most important educational criteria is that mentioned by Miss Zirbes in the discussion in the Section on Materials: "Is the material dynamic, is the method dynamic; does it achieve results in changing the child himself?"

Dynamic material: dynamic method

I think that without important exception, I can say that Miss Patton and I found a really positive health point of view

underlying the materials we examined. There was some attention to disease, but very little. What there was, had a really positive health approach.

Analysis of material

With regard to the philosophy of education, I might say that nine of the ten sets of exhibits definitely showed a use of the project as the chief method. There was no evidence except perhaps in one case, of following a prescribed course of study in any great detail. There was considerable evidence that the material was adapted to the children's needs, or at least that the teachers had made an effort to find out what the children's needs were, and then to arrange their program accordingly.

Six of the teachers had made a rather comprehensive analysis of the situation of their own pupils with regard to home environment, the kinds of parents they had, the physical difficulties that were found (one of the classes was an underweight class) with regard to the economic status of families and food habits and health habits which the children had at the beginning of the course. Now, of course, these were not complete analyses, but they showed an attempt on the teachers' part to find out what the real situation and the real needs of the children were.

The criteria for selection of subject-matter, in so far as they were expressed, were drawn from the child's needs as shown, for example, by physical examination records and the needs of the community, as the teachers saw them, the needs of underweight children, etc. Those criteria were rather general. They were not particularly specific but they showed an attempt to choose subject-matter on the basis of need.

You will be interested, I think, in knowing what was chosen. We itemized rather carefully all of the facts which were brought out in the materials which we had. Now, of course, we realize very well that materials that are put down on paper, such as posters and stories and essays written by the children, and outlines made out by the teachers, are not an adequate measure, in any way, of what the real health education program was. You must have the children before you in order to measure that, but so far as these papers showed, there were 163 different items of information, covered in the ten sets of materials. These fell into twenty-two major groups.

Items with regard to food and nutrition appeared most

often. Big muscle activity, outdoor plays, outdoor sports appeared second. Cleanliness was third. Teeth stood fourth, and character and mental hygiene stood fifth.

High and low ranking of items of information

I would like to say in regard to the latter point, that the high ranking of character and mental hygiene was due to two or three exhibits which gave a great deal of emphasis to those points, for there were only four out of the ten which gave any attention at all to character and mental hygiene—that is so far as it showed on these papers that we studied.

The items which ranked lowest were items with regard to physiology and elimination of waste. Now you will notice that in the first five, those which ranked highest, diseases and defects were not mentioned. That topic ranked seventh.

There is an interesting comparison to be made between these results and an analysis that Miss Strang made in the preparation of the health tests about which I spoke the other day. Her analysis dealt with the emphasis on topics as found in courses of study and textbooks. As I remember it, food and nutrition came first in that analysis, but disease and defects came second. Now I think that a significant difference, because the teachers' materials represent the more modern health education point of view.

We were very much interested in examining the informational subject-matter with reference to its quality, and we feel that so far as scientific accuracies were concerned, it would compare very well in percentage of accuracy with the ordinary textbook.

We also examined the material with reference to relative emphasis on personal health and community health. In community health we included such items as the statement, "Good sound teeth help to make you a better citizen," because it showed an attitude as much as knowledge. Less than one-third of the materials showed any attention given to community health. One reason for this is that the materials came largely from the elementary schools and we have not been in the habit of thinking of elementary school activities with reference to social or community needs.

We tried to get some evaluation of the attitudes shown, but it is very difficult to get any idea of attitudes from looking at

a paper. We did find, however, that it was possible from materials the children had produced to get a little idea of attitudes.

Attitudes

For example, when a little girl writes a story about "a beautiful, rosy, neat old lady and her untidy, dirty little niece," you get some idea of what the attitude of that child was.

However, I shall have to confess that we are not very much wiser in the end with regard to attitudes, than we were at the beginning, except that on the whole they seemed to be wholesome and positive. There were remarkably few instances of bad attitudes as indicated by the materials the teachers had prepared. There were two outstanding groups of harmful attitudes which we thought might have resulted, one from too great emphasis on physiology and the other from overemphasis or worry concerning overweight and underweight. They were, however, relatively rare.

We found in the kinds of material examples of different purposes. For example, there was one group of stories which we itemized according to the main thoughts or topics to see whether the content was concerned with attitudes, scientific facts, or practical applications of science. There were twenty-eight topics, and eighteen of those thoughts or topics dealt with appeal to attitude or some suggested emotion. Five of them dealt with scientific fact, several of them with a practical application.

Such a study of methods and material is most interesting and illuminating.

Miss Phelan:

Our problem is a problem of teacher training. We had six hundred young women anxious to become skilled in the art of developing healthy children, two hundred children in the training school eager to get in line, and a conglomeration of material which the student teacher might use in her attempt to develop healthy future citizens.

Our problem was to find a procedure that would be of greatest value to the young women in their work. I should like to have you think of this procedure that I give you this morning as conditioned continually by the point of view of the critic teacher, by the capacity of the prospective teacher and by the age period of the child with whom we were dealing.

The group of young women together with the grade teacher and myself attempted to take out of this mass of information what we, in our particular position, might consider the crucial points, and the girls set up for the children, health goals from first grade through high school.

Five distinct main goals were finally decided upon. The first one was that of mental, social and emotional health which for want of a better term, we called personality and in which we considered these ten specific things: courage, honesty, ideals of workmanship, discrimination of values, organization, perseverance, optimism, sense of responsibility, obedience and cooperation. Health goals

Before these could be used, we had to determine what we should consider evidences in the different age periods, that the child had set these goals up for himself, that he was striving to reach them. Very briefly let me take one just to illustrate what we tried to do. Suppose I take "courage." The experimenting critic teacher and students finally decided that in the first and second grade period, the evidences of courage on the part of the child might be shown in not being afraid of the dark, not being afraid of people such as the doctor and the nurse, and the policeman, and not being afraid of animals; in the third grade, an evidence of moral courage should begin to show; in the fourth grade they expected to find in addition self-confidence, i.e., the child should not be afraid of himself and of his ability to do things and this should increase in the fifth grade; and finally by the sixth grade the child should have a pretty well rounded belief in his own ability to conquer. Beginning in the junior high, we were bold enough to indicate that we hoped to have an evidence of intellectual courage.

This is all simply a beginning, very crudely worked out, as the result of the thinking of a group of young women. It is conditioned by the students we had to work with, the children, the point of view of the critic teacher and the environment in which we found our children. We worked out the other points in practically that same way. Throughout all the age periods we attempted to trace a development.

The second goal set up, beginning at the first grade, carrying right through the high school, was the posture goal. We

gave that a definite place by itself because of its influence not only upon the physical health but upon the emotions, upon mental attitude and mental health of the child. We have been able to polish the goal of posture, very much more than we have any other, because we have had help and suggestions from many physical education people.

Health habits were the next goal set. The health habits considered were (1) sleep, which meant twelve hours in the dark with open window and without a pillow, beginning in the first grade, carried right through the high school; (2) fresh air, evidenced by activity outdoors every day, fresh air in the bedroom, etc.; (3) food habits, beginning at the first grade with simple food selection, and (4) the habit of regularity, a regular meal time, regular bed time, a regular morning bowel movement. It is true those evidences showed up a little differently in the different age periods. In the high school we expected self-direction in the regulation of bedtime and waking hour, meal time and the rhythmic bodily functions. Under health habits we considered also those protective habits of sanitation, and of safety, the habits of accident prevention and the habits necessary for disease prevention.

Growth the fourth goal

The fourth selected was the growth goal, and we considered that from four angles: (1) The normal growth. Here we considered the rise of the weight curve and the approximation of standard for sex, age and height. (2) Good nutrition, as evidenced by the membraneous color, sub-cutaneous fat and a nervous stability. (3) Freedom from health handicaps. We decided that a child had reached that goal when his vision was good or corrected, good hearing, sound teeth, spine and feet good, throat clear and nasal passages clear. (4) Disease resistance. We selected as evidences of disease resistance on the part of the child, his freedom from colds, his school absence record in relation to illness, his immunization to certain diseases toward which he might become immune, and a healthy skin. Those evidences remained practically the same. In this disease resistance we brought in also an increase of strength and energy, strength and vigor carried through or beginning in the early years of puberty.

The activities of the children constituted the fifth goal.

There were physical activities, beginning with simply the big muscle activities and carried through to athletics and sports and hikes and all those things in the later years. There were the dramatic activities, to develop certain tendencies on the part of the child, and the social activities through which we might help in developing some of the objectives in Goal One.

We decided that in the early years, the pre-puberty years, our emphasis must be placed upon the growth and nutrition of the children, after that on an increase of physical activity in order to increase the strength and vigor of the child.

We began the emphasis on community ideals in health in the early puberty years, carrying through the high school in the social activities and in the physical activities. These points and goals were used as a basis for selection of subject-matter which would rationalize the child's striving after these goals. Then the students worked out a correlation of where this subject-matter might be found and what opportunities were given for the child in the school life to develop or to reach these different goals.

Miss Zirbes:

I wonder whether the teacher-training institutions should not make some specific attempt to apply psychology to problems of incidental teaching and correlation. Do teachers know how to weave things into life in their natural relationship? Do teachers in training have the tact and the knack of doing that thing or does our correlation program fall down because we hope to make it effective through having an interdepartmental committee instead of making the teacher an effective agent in putting health into the school today? To me that is a problem for the psychology department and the methods department of the normal schools.

Psychology applied to incidental teaching

Chairman:

I have had some experience with teachers who have been trained in educational psychology in a teacher-training institution. I may say that I do not think the psychological teaching in the teacher-training institution a fundamental training in psychology leading students up to and giving them the applications to the specific and practical fields. Just how much of that

may be the business of the professional courses dealing with the application of a particular subject—for example, the professional course in health education—and how much of that application should belong to the psychology department is a point to be worked out. It must be worked out differently in different institutions. I am sure of one thing, we cannot assume at all that the teacher of these subjects will make all of the desirable applications in the health field unless some interdepartmental committee or some advisor or supervisor of health education has worked it out and indicates definitely where these applications should be made.

Miss Dolfinger:

Correlation taught in educational psychology course

I think Miss Zirbes would be interested to know that the things she spoke of are in operation in the Ellensburg Normal School where that type of correlation is carried out in the educational psychology courses and where the teacher of psychology is one of the very strong links in the chain by means of which this correlation is not only brought about within the student's life but within the life of the teacher of the students also.

Chairman:

Mrs. Paul who has recently been organizing a new Department of Home Education in South America, will say something from her experience with the underprivileged type of teachers she found there.

Mrs. Paul:

I did not expect to teach when I was in South America and when the Brazilian Government asked me as a favor along with eleven other people, to coordinate and reorganize their educational system, I don't think I was thinking so much of subject-matter as I was of Portuguese.

Although I was obliged to talk in broken Portuguese to the girls, I was seldom asked to repeat anything. I had to demonstrate much to make myself clear. My girls averaged 98 per cent in Brazil in their grades. In Pratt Institute they averaged about 20 per cent lower than that, sometimes, in the same subjects, and I have wondered if the tremendous amount of reading

material we give our students doesn't fag their minds sometimes. In Brazil we had very little equipment in the organic chemistry laboratory. We had two test tubes and two Bunsen burners for the whole class, but the girls attended and I got over more than I believe I ever got over to my American girls. I am still wondering why this tremendous difference. Do we require too much reading, and not give time enough for the digestion of what we ask them to read? Do the teachers here help their students too much, do the students always feel that they can come back and get more material some other time? I cannot say.

Underprivileged county normal classes

Miss Rood was asked to outline some of the methods she employed with her underprivileged county normal class, involving activities other than reading. The following list of activities for children, as carried out by student teachers, was offered for discussion.

Summary of Work in Richland County Schools in Visual Reports

Use of demonstration children.

Weighing and measuring regularly. Eyes and ears tested and seating rearranged. Morning inspection every morning. Supervised play at recess and indoor games on rainy days. Poster work using slogans composed in normal school. Dramatization of a supplementary reading lesson "The Good Fairy." Blackboard drawing and lesson on care of eyes.

Stunts taught to all demonstration children.

Health songs taught.

Health spell down.

Lessons on foods with pictures gathered by children, also use of food models.

Letter writing to Miss Rood, telling of perfect inspection record, of sleep houses made, of the field meet, of the bandaging.

Composed items for School News on our outdoor period.

Relay games and relief drills.

Dramatized lessons in Safety First.

Safety First buttons made in art.

Parents visited to obtain consents for examination; also follow-up in some cases of defects.

All emergency work in the demonstration class taken care of by normal school students.

Sand table projects correlated with health in demonstration class.

1. Japan, 2. Eskimo, 3. Daniel Boone, 4, Bible Biography, Daniel, David, Joseph.

Summary of Section II, Topic 5

METHODS IN TEACHER TRAINING FOR HEALTH EDUCATION

THE educational principles that apply in the choice of methods for health education do not differ essentially from those which apply to education in general. But as is true in other aspects of education, principles of method must be appropriate to the particular objectives to be attained.

The threefold objectives of health education necessitate a threefold statement of principles of method.

The psychology of habit formation pertains to the formation of health habits as truly as it pertains to habit formation in other educational fields.

Habits are a personal matter and the first consideration of method is the investigation of the habit status of the particular pupil group and adjustment of procedure to actual individual needs. Having ascertained the status, we should organize practice and guidance to accord with the psychology of habit formation. We should:

Make practice like life situation.
Distribute practice psychologically.
Be specific.
Launch habit well by repetition of correct practice and special guidance at the start.
Use positive methods.
Enlist conscious effort.
Provide inherent satisfactions on habit formation.
Provide dissatisfaction for lapses.
Give pupils concrete evidence of progress by keeping records and making measurements.
Use social criticism and social motives.
Build for permanence by enlisting pupil responsibility and initiative.

The following psychological principles apply when the acquisition of health knowledge is the objective:

1. Facts and subject-matter selected for such emphasis should be matters of vital immediate concern.
2. Concrete illustrations of principles should be used and multiplied so that pupils may arrive at generalizations as a result of their own thought and experience.
3. Facts should be related and presented in a medium of pupil activity, i.e., as aspects of a problem or project.
4. There should be opportunity for using information and applying knowledge to needs of real situations.
5. Broad and varied associations should be used so that facts may be recalled and used widely, i.e., so that knowledge will function broadly in life.

The formation and inculcation of desirable health attitudes proceed according to psychological principles. Attitudes accrue from vivid satisfying experiences.

1. Satisfactions or incentives must be inherent to health if permanent health attitudes are to ensue.
2. Attitudes are inevitable accompaniments of all activity, i.e., all activity is accompanied by some emotional tone.
3. The neglect of provision for positive attitudes is responsible for the formation of negative attitudes.

The general nature of the health program is such that the psychology of incidental reference must be borne in mind.

1. Teachers must be conscious of the immediate objective in each incidental reference and select and refine each particular stimulus to make it effect the desired end.
2. Teachers must preserve a proper balance between various health objectives through the proper apportionment of emphasis, method and materials.

A report was made of a study of ten sets of materials which had been submitted from ten different classrooms, showing the respects in which some of the preceding educational principles were applied by teachers, and suggesting how they might be more fully applied.

1. The results of the health education activities were in each case measured by actual changes in health habits, health conditions of children indicating that a dynamic conception of health education prevailed.

2. With but few exceptions, the emphasis was on positive health rather than disease, indicating a wholesome philosophy of health.
3. In nine of the groups, the project method had been followed either entirely or in part, indicating a progressive philosophy of education.
4. The scientific subject-matter contained, compared favorably in respect to accuracy, with the accuracy of the average hygiene textbook.
5. Approximately one-third of the subject-matter showed some appreciation of the importance of community health.
6. Eight of the groups indicated that subject-matter had been chosen with some conscious reference to the health needs of the pupils.
7. The items of information fell into twenty-two groups, of which the first four according to order of frequency, were (1) food and nutrition; (2) big muscle activity; (3) cleanliness; (4) teeth.
8. So far as it was possible to study attitudes, it appeared that on the whole, the attitudes created were wholesome. The exceptions were the possible undesirable attitudes resulting from occasional overemphasis on the physiology of vital organs, and the worry which might have resulted in children due to unwise emphasis on the danger of under or overweight.

It is essential that supervisors and specialists in health education in assisting the teacher in service, use the psychological approach of the project method, respecting the individual interests, abilities and problems of each teacher. In this connection, it is particularly valuable to have teachers assist in preparing the course of study which they use.

In meeting the needs of teachers in service, it appears that simple, very definite, concrete materials are particularly useful, especially in preparation of bibliography and lists of source materials.

The felt need of many communities for a local course for teachers in order to improve their technique in health teaching may be used as the entering wedge in the setting up of a complete school health program. In developing such a program, it is advisable to make long range plans for the future development of the work by securing the vital interest and activity of not only classroom teachers, but of the school administration as well.

This may be done by gathering into a study group, repre-

sentatives of the various factors involved in a school health program including superintendent of schools, the supervisors of special studies, representatives of the school nursing service, members of the school board and classroom teachers, making them co-workers in a community project, and helping to make an analysis of their present school health situation and their health needs.

Since one of the outstanding health needs of many school health situations is a psychologically developed course of study for health education rooted in all of the "regular" subjects in the curriculum, the outlining of such a course of study may well constitute the special project of the classroom teachers, around which to organize the development of their personal and professional health knowledge, their health habits and attitudes.

The administrative members of such a study group may assume as their special project the coordination and improvement of the existing health facilities in the school system.

A report was made of a special project used in an effort toward technique improvement of student teachers. The student teachers set up health goals in the elementary school, analyzed evidence on goal attainment, selected and adapted subject-matter to rationalize the child's effort to attain the goal, discovered correlations and opportunities for projects through which goal attainment might be made possible, and listed materials for the use of the teacher.

For studies, see Recommendations, Section on Investigations, Nos. 6 and 7, and Section on Research, Nos. 1, 2, and 3, page 238.

Topic 6: CONSIDERATION OF RURAL PROBLEMS IN TEACHER TRAINING FOR HEALTH EDUCATION

Chairman: Dr. Thomas D. Wood

Chairman:

Two general problems

As the program indicates, the two general problems of this session are the questions: What adaptations should be made of subject-matter and method for training teachers for rural work; and what studies should be made, based as always,

upon properly guided experimentation? I believe that any answers to these specific questions, would be much more helpful and effective, if we could place them against some statement of those familiar with the rural field from the standpoint of general education and from the standpoint of the knowledge of general health conditions. Before we take up these special problems, therefore, I am going to ask Dr. Clark to give us from the fund of firsthand knowledge which he has, some impressions regarding rural health conditions and the health status of rural school children. Dr. Taliaferro Clark is of the staff of our United States Public Health Service in Washington, D.C.

Functions of U.S. Public Health Service

Dr. Clark:

Being born and raised in the country, I have never lost interest in rural conditions and in many of the problems in those communities, including the health problems.

You will be better prepared to appreciate the position of the United States Public Health Service in respect to health education if you have some knowledge of the functions discharged by the Service; therefore, I shall take a minute to give you a brief résumé of them. Historically, the Public Health Service is the oldest government bureau. Established in 1798, it has continued to function as a Bureau, with change in name from time to time, ever since, for the prevention of disease and, under broad statutory authorization, as a health education agency. We are teachers, but not pedagogues. We are interested in health as it affects groups, communities and the like, rather than in the individual as a health problem.

On the other hand, we do not lose sight of the fact that the educational authorities have the opportunity and probably will, in the not very distant future, become the most effective and successful teachers of health. As they are successful in instilling an appreciation of health values in their charges, many of the measures now enforced by the public health authorities for the control and prevention of disease will become unnecessary.

For example, public health protection in a rural community is an entirely different problem from that in a city. In rural communities every man is in a large measure a law unto himself.

Rural communities

We cannot introduce pure wholesome water in his home, whether he wants it or not, as we do in cities. We cannot maintain or exercise as effective quarantine because the cooperation of the individual is so necessary. Probably, in most instances, we are dealing with a people who are set in their ways of living, habits of sanitation and personal hygiene. The main reliance for the sanitary redemption of these communities, therefore, lies in the education of the rising generation in health matters. The influence of the teacher does not even rest here. In addition to teaching positive health, I think we all realize that the teacher may be a valuable instrument for the detection and eradication of physical defects. For these reasons, to my way of thinking, any consideration of health education, particularly in rural communities, will involve two fundamentals, one, the subject-matter that shall be taught, and the other the manner in which it shall be taught. The public health authorities are in quite general agreement that the pedagogic aspects of health education are not within their province, and may not be included in the ordinary discharge of their duties. However, it is essential that the health authorities investigate health problems and develop facts relating to health for the use of the pedagogue. For example, the sanitation of schools is a factor to be considered in health education because in making provision for the sanitary requirements of school buildings health is taught by example rather than by precept.

I do not think it has been definitely or satisfactorily settled just how much health is to be taught the child. It has not yet been determined entirely what are the facts in all instances that should be taught the child. However, in health teaching, irrespective of the method of presentation, it is essential to deal with facts, that the information should be accurate, and that there should be the closest cooperation between the sanitary and health education agencies of communities and states.

Chairman:

As we take up now this problem of subject-matter and method in the training of teachers for rural schools, I shall call on Miss Harris.

Miss Cara L. Harris, Director of Health Education, Rutherford County Child Health Demonstration, Murfreesboro, Tennessee:

Rutherford Co. Child Health Demonstration, Murfreesboro, Tennessee

In planning a few brief courses for teachers of rural schools, I have tried the plan of asking the following question, "This group of teachers is to study public health; where shall we begin?" Most teachers will answer that they want to know how to get better ventilation, lighting, heating and sanitary facilities, how to provide those material surroundings for children that they should have. This is a good starting point with your teachers. They seldom include correction of physical defects of children and the practice of health habits.

Now in covering the environmental factors, it is quite important that teachers shall know the direction from which light should come in planning for the construction of a room or for changes in rooms already in use. If you have windows on three sides or perhaps on four sides of the room, what should be done about it? You might even have a schoolhouse in which some person had decided that if you covered the upper half of the window with a shade, there was really no need to build the upper half of the window at all! Don't think I am creating this illustration because we have just such a situation. The rural school teacher needs some very practical suggestions about how to get necessary changes made. For instance, she can be shown that windows in a side of the house where they do not belong, can be shut up, leaving a small space at the top for a small window for cross ventilation, giving more wall space. The windows removed can be put on the proper side of the house to provide additional lighting space. If more windows are needed, perhaps some window frames left over in a neighboring school can be secured. It is practical suggestions that are needed.

Another important question in rural schools is that of stoves. I think we will all say, "Let us have a stove with a jacket." The schools do not have jacketed stoves. What shall we do? One enterprising teacher suggested, "We will spend a few dollars and get a sheet of galvanized iron, made to go about two-thirds of the way around the school stove and cut off the direct rays of heat, so children near the stove will not be overheated." The city teacher, however, does not have anything to do with the heating of the room except to make the complaints.

She has nothing to do with providing sanitary facilities. That is an administrative problem, which goes back to the principal and school officers. She should know the fundamental principles of ventilation and heating, of course, but I mean as a practical working scheme she rarely does have to deal directly with it.

Then there is the question of getting sanitary toilets. Teachers need some practical suggestions as to type and expense of construction, and means of interesting taxpayers in dealing with that difficult question.

In connection with lighting, the question of adjustable shades must be considered. Who has them in the country? Teachers might learn simple expedients such as to drop the window shades at the top of the windows, not forgetting that the sunlight in the morning may come over these shades, if the shade is not sufficiently near the top of the windows. In their good intentions teachers may flood the room with too much light, so they must learn to estimate the needed amount of sunlight. They can buy pulleys for very little money and attach the window shades to movable pieces of wood that can be raised and lowered by the pulleys with cords adjusted. One must discuss different treatment of windows on the east and south side, and the amount of light needed. Rural teachers need very practical suggestions.

Practical suggestions for rural teachers

The next big need for rural teachers, is some knowledge and appreciation of what has been done to enable us to control communicable diseases, both to keep the disease from spreading, and to develop increased individual immunity. You will find large groups of teachers in normal schools who have not been vaccinated, and who are hardly conscious of the fact that smallpox is widespread through the country. You will find that information regarding individual protection from communicable disease is not understood and appreciated as it should be. In some sections you will find a man who will conceal the fact that smallpox is among the negro workers on his farm. He feels that if this becomes known it will hurt his business interest. We must develop the attitude that neither an individual nor a community can afford to be responsible for endangering the health of other people. A little girl in a local school asked me if I would take another little girl who was sick, to her home as I returned from

school one day. The sick child said, "I told Daddy this morning I thought I had the mumps, but I didn't want to miss, as I have not missed this year." This little girl could be taught that it would be better to make a poorer attendance record than to expose other children to such a disease.

There is a very striking illustration that you can note in any rural health department. If your community keeps health charts, compare the chart that comes from the town schools where they have good regulations for requiring vaccinations for school children with those from rural schools. You will find in the city 100 per cent who have observed those regulations; outside the city, you will find very few vaccination records. One of our major problems is education in protective measures against communicable diseases. Of course, this includes the problem of sanitation.

Outstanding problems

I am only trying to cover outstanding problems. In regard to the correction of defects, there has been enough publicity for everybody to be informed on that subject but the rural school teachers are not in the habit of thinking out ways of getting help from established groups. They are not in the habit of getting the help from the county health officer, if they have such an officer. If they have a county nurse, it is a long time before they learn to go to her for suggestions as to how to get defects corrected. Therefore, some knowledge of how to get defects remedied is very necessary in the training of a rural school teacher.

Every rural school teacher should get in touch with the county health department. If she possibly could, she should go to the state health department. She should get acquainted with the different agencies that could be helpful to her in solving her problems. It matters not whether it is protection from communicable diseases or the correction of defects, she needs to know what organizations she can work through.

I want to speak more specifically of things to be done in supplying the kind of surroundings in which children can develop wholesome habits of living in the rural school. We are very anxious to have rural school lunches. But if our teachers get their ideas of hot lunches from the ordinary demonstration school, cafeteria, or some large school with an active parent-

teacher association, they will go away discouraged. We must not let our people feel that the equipment is so elaborate that there isn't any use to try it in small schools. The thing to do is to give them a little bit of experience in doing the simple thing that can be done in any rural school in their training courses, if possible.

Simple equipment

Getting play apparatus is rather a difficult thing in rural communities, because there isn't much sentiment for play. But the teachers should be taught to know what constitutes simple play equipment for rural schools, and how to get on the ground and use it. It isn't necessary to have much equipment in order to give children pleasure. They don't need much, but the teacher must know how to get hold of the few things needed.

It is a tremendous undertaking to go out into the rural school with all these things to be done, and experience that awful feeling of alone-ness in attacking the problem. Perhaps the teacher's first need is to learn how to get together some of her patrons so she can have a feeling of support and sympathetic understanding.

Chairman:

Miss Rood will continue this discussion.

Miss Rood:

Every year in organizing the work in our normal school class we have tried to govern the selection of material by the reactions from our field.

We have had about thirty students teaching in the county this year, who are from our own normal school class. I believe there is no better way to find out where you fail in the normal school class than to go right out into the schools and see what those students are doing. We get our reactions from the field in several ways. First perhaps by the personal visits to the school, which are always effective means, since the students are quite willing to discuss their problems telling why they have not been able to do certain things or why they haven't the support of their community, and so forth. Then we get considerable enlightenment from conferences with the county superintendent, who visits schools for other purposes but who is also aware of

health developments. He knows the difficulties of the various schools, and they differ very materially.

We have also personal conferences with the teachers, which also give us a great deal of information, talks with the parents at the parent-teachers' meeting in the country or at any group meetings that bring in the fathers and mothers to the country schools. Perhaps the most fruitful sources of information, however, are the public health nurses who go into our schools and visit them much more often than anyone else in connection with the Demonstration. They not only see the actual results in the school and in the children, but they receive firsthand reactions from the fathers and mothers in the homes they visit, especially if they go into a home on a sick call. The mother and the father are very apt to confide in the nurse. After they get to know her, they tell her all about the things which go on in their little rural school, which is a very big place to them. We also know from the nurses which teachers need encouragement, or need holding back a little because they are ahead of their community and are wanting to do things that might cause trouble. The nurses very often are responsible for keeping the flame of interest alive in some of these teachers who get discouraged because they find the situation so much more hopeless than they expected to find it. So it is on the basis of these reactions that I am going to enumerate some of the things we feel should have increased emphasis in our county normal school class next year.

County public health nurses

More and more we need to check on ourselves to see that the principles that we are promoting in our rural schools are actually being carried out in our own normal school class. We cannot expect teachers to go out and do these things unless we ourselves set the example in the normal school. Is the spirit of the teacher in the normal school class an example of the thing that we want her to develop in her school? Is the normal school classroom an example of good housekeeping, good sanitation, good light, good water supply, and all of the other points we are working for in the rural schools? Are the practices and activities of the normal school class in accordance with the principles of the best health teaching? For instance, the morning inspection in the normal school class. Is it a real function of the day or is it a routine procedure for the purpose of teaching

the students the proper formal procedure to go through in school?

Are the recess periods in the normal school carrying out the principles of health we are teaching in the class? Are incidental correlations being made daily? Is the direct health teaching period used conscientiously and faithfully every single day, or is it sacrificed sometimes when there is going to be a test in arithmetic?

Checking up the normal school

On all these things we need to check ourselves in the conduct of the normal school class. In the observation field used by our students, are we sure the students see creditable work? Or, if they are taken to a school where they see poor work, is it followed by good work, so that the student has a vision of the things as they ought to be? I feel, if we go into a school where poor work is seen, it should later be brought up in discussion so that the poor points are brought out in comparison with the good points in the same school.

We should be most careful that the spirit and atmosphere of the school used for observation purposes is good. Many of these young teachers do not realize how much the mental and spiritual atmosphere of the school mean to the child's growth and progress. Untold harm may be done to these young people who go in and find a poor spirit being developed in the school. They may feel it is the proper way to manage a school. We ought to study ways of making sure that our students have ample opportunity to develop originality and initiative in their methods with children, under supervision and guidance and with criticism, but to be sure that that guidance and criticism do not stunt originality in their practice work.

We need to study more carefully how to develop in the students a spirit of enthusiasm for the health work, even though these students may come from country homes where up to date health practices are not believed in at all—where open windows or vaccination are things unknown and forbidden. For that reason I believe if children in a city school are to be vaccinated, the normal school class should be brought into that room to see it done. If necessary they should see the progress of a child's arm afterwards, and convince themselves of the result of vac-

cination. Then they should be given the opportunity to have vaccination themselves later.

It should be a matter of education, so that they would all volunteer to be vaccinated before the class is completed for the year.

Rural sociology for the rural teacher

Rural teachers need more psychology and rural sociology. They need some of the psychology of salesmanship which will enable them to introduce health into their schools without antagonizing their community. Very often over-eagerness on the part of the teacher to introduce the thing which she has obtained in the normal school class, is just as serious a problem in the country community as the discouraged teacher who does nothing. We must teach her to keep to a happy medium and administer her job with a finger on the pulse of her community all the time. She must be very careful not to get so far ahead of her people that she will lose their support—a tragedy in a country community.

We need to help her make better use of her community organizations. If she goes into a school where there isn't any organization, she should know how to develop some kind of community organization. She needs much training in community leadership, more courage in expressing herself occasionally but forcefully in a country meeting. She needs to give more attention to the health practices of her own community meetings. Country people taking part in community meetings very often like to have cheese sandwiches, coffee, weiners and pie at about ten o'clock at night or later. Children taking part in the program are included and are kept up until a late hour.

Safety should be considered in these meetings in the schools. I have been in some of these schools where they had old-fashioned kerosene lamps, all the windows being covered with heavy wire screens. The little children, the babies, the fathers and mothers would be crowded in together without a chance of escape, in case of fire.

All these things concern the community health in the little rural school, and our teachers should be aware of them. We need to give the teachers a definite aim in their health work. So often there is no definite aim. If an analysis of what you can

really accomplish with children could be made by all the workers in the country agreeing, it would help tremendously.

Then we need to transfer this aim into our normal school class itself so that the students will work toward it with the children in their practice schools.

We need to provide more material in the normal school class which the students can take with them into the schools and draw upon when they find they haven't anything for reference. We need more complete page by page surveys of the rural textbooks, histories, geographies, civics, agriculture and so forth, so that when we talk to the teachers in the normal school class about correlations, which is the big way of teaching health in the rural school, we can show them how to use what is in their required textbook material. We should know that on page so and so in our history or in our geography, there is a good chance for bringing out a health correlation.

Survey of rural textbooks

I feel the students should take part in this textbook survey so far as it is possible to find time to do it. They need more practice in detecting these correlations, and more skill in presenting them, because especially in the case of incidental correlations, the presentation should be done skilfully and subtly. If the association is made poorly, children are very apt to say, "Oh, I don't care for that stuff; teacher is always preaching that." It has to be done very skilfully in order not to tire children with too many references to health.

Then we need to encourage more use of outside material that teachers can take into schools. After working with a dog's head as a model for lessons on teeth, one of the students said to me, "I should like one of those dogs' heads to work with in my school." So I said to her, "If you will speak to the sanitary officer, he will save the best dog's head he can for you, and you can fix it up." She screwed up her face and said, "I don't know whether at the place where I stay, they will let me fix it. May be I could take it into the woods." I said, "It all depends on how badly you want the dog's head. It is very good material to use in teaching, and I think you will find it very valuable. I think maybe you will find a way to do it." And this summer she has gone into the woods, and stayed out there six hours; I expect she will have the dog's head ready for use by next fall.

Case method in teaching

We need to make greater use of the case method in our teaching. Take real problems from our own field and bring them into the class for discussion and solution, rather than problems taken out of a book. For instance, this is one of the problems we used this past year: "Suppose a ten-year-old child in your school who walks two miles to school every morning, was taken sick at ten o'clock and in the middle of the class period you took her over to a window and discovered this child had a red throat. When you looked closely at it you discovered some queer looking patches. The family had no telephone. What would you do about it if you were the teacher of that little school?" It brought a great deal of discussion and interest, and the students never forgot the points that came out in connection with this real problem.

Another real problem. A child entered first grade. Very early in the term the teacher discovered that the child was not able to see; she could hardly guide herself around the schoolroom, and her writing was just a scrawl. The teacher went to the parents and the father immediately said, "Oh, well, Emma will get over that; she will outgrow it. Children always do." The teacher went back to the school. What is the next procedure? That too was a real case, and it created an interest that just a made-up case will never do, since students knew it happened in one of our rural schools and in a territory where any one of them might be the teacher next year. What would *they* do about it?

We need to have the class work out outlines to use as type lessons in the practice school, which they can later take with them into the rural schools. After they have taught the outline once they are going to be able to do it better in our rural schools.

We need to make more use of health examinations in the rural schools as a health education project. We need to have the teachers see that the children are really the most important persons concerned in a health examination, and that if they can develop enthusiasm among the children for the correction of defects, nurses will not need to make many visits to the homes. The children will do the following-up. By taking the normal school students right into our schools when examinations are going on and letting them hear the conferences which enthuse

the children, we can help them transfer that enthusiasm into a rural school.

We need to make use of the local event at the time it happens for teaching purposes. For instance, in the normal school class I think we should discontinue everything else when a mad dog has just gone down the street and bitten a lot of people. The normal school students get the data and study the case as a community problem. When Mr. Brown who lives across the street from their rural school, has to have two valuable cows killed because they have been bitten by a dog with rabies, then that is the time to discuss rabies with rural children, and to make that their lesson in health.

We need to have the normal school student see her opportunity to work in a partnership with others when it concerns the health of the rural child. Everybody is concerned in improving the condition of these children and she needs to feel that it is her job to get in touch with these other people.

We need to find a more efficient way of conducting the hot lunch. We have been giving in our normal school class the cooking of the hot lunch in the school. It has evidently not been effective, because this year when we went over the results of the normal school teachers in the field, we found only 50 per cent were conducting a hot lunch in their schools. There is something wrong with the method we have used. I think we should find out what is the most effective way of serving a hot lunch in the rural school and use that in the normal school class.

Hot lunch in one rural school

I went into a rural school the other day, and found a man who had been teaching many years. I found he had been running a hot lunch about three years. He said, "I just wish you could stay over the noon hour and see the children have their lunch." He brought down the big copper boiler from the top of the bookcase at about eleven, poured in some water and placed in it a number of little jars, then set it up on top of his big stove. At twelve o'clock the boiler was steaming, everything was hot. He took it down and the children all had their little jars and long handled spoons. I will tell you some of the things that were in those jars; there was a jar of tomato soup, one cream of tapioca, six rice with meat cooked in it, one jar of cocoa, one of beans. There were a variety of other things but I noticed that

the lunches were all very nutritious. They were cooked and put up in the home.

This teacher said, "I started this three years ago. When I came to the first institute all I heard was about cooking things at school. Says I, 'I am not going to say anything about serving lunch out of a boiler, because they may think I am trying just the easy way out of it.' But I just want you to see that I haven't got any underweights in my school. I kept it going last year, but I never mentioned it in the teachers' meeting; but last spring I came home once and I says to my wife, I says, 'A teacher in the institute said one of the best ways was to let the mother do the preparation and to put it in a little jar and heat it, that the way to heat it was to heat it with the jar.' I came home feeling better—I was doing it the right way after all. I am going to tell people about it now." I said, "Will you bring in your boiler and rack, only make another rack so they can have a place for forty jars, even if we have to have two layers, for next fall's institute, and talk to the institute people for about fifteen minutes on 'How I served a Hot Lunch for Three Years?' " He said, "I will do it." So next fall we are going to have the boiler and the two racks, and we are going to see that there are about a dozen little jars with some spoons, and we're going to ask some of the teachers to sample it. He said, "I couldn't cook anything, but I can give them a hot lunch this way."

Demonstration of Schick test test and toxin-antitoxin

We need to familiarize the students with the modern ways of protecting children against disease. I think we should take students into the classroom when the Schick test is being given, and when toxin-antitoxin is being administered. The demonstration should be accompanied with instructions as to how the test is administered, how it is prepared, and what it is for. Let students see the children before and after each treatment, so as to convince them that it is perfectly all right for the children.

And we need to have them realize that nine-tenths of their success in health work with children depends upon their winning the children. Almost invariably in the schools visited, where personal dislike of a teacher is evident among the children, there is no health work. We must find a way of bringing out this fact in normal training classes. This goes back to the problem of

the development of personality, health, strength and vigor in the students in the normal school class.

Dr. Glenadine Snow, Health Director, Michigan State Normal College, Ypsilanti, Michigan:

Rural schools of Washtenaw County, Michigan

This year has brought what we believe is a real beginning of health education to the rural schools of Washtenaw County, Michigan. Last fall the county supervisors appropriated a sum for the examination of rural school children. A physician was appointed for the work and between four and five thousand children were examined.

Before the work was begun the county commissioner called a mass meeting of all the teachers, and the plan was explained to them. Since there was no county nurse, an appeal was made to the teachers to follow up the examination. It was a very enthusiastic meeting, and we all felt that keen interest had been aroused, and that an important step had been taken, because, without the vital interest of the teacher no permanent program can be established. The results of this survey were worth more to those teachers than a whole term of lectures could have been. Almost without exception every little one-room school has the beginning of a health education program.

Twenty-three of the schools in this county have an affiliation with our normal college. A group of helping teachers who have their training in our rural education department visit the schools regularly and assist the teachers. This gives us a wonderful opportunity to help develop our health education program.

We have only made a beginning of the work we hope to do. We have been much encouraged by the cooperation of the parents throughout the county. In one of these schools word was sent out by the teacher to the parents that on a certain day the children would be examined. Eighteen mothers, representing twenty-two children came to be present at the examination. With such interest of parents, the follow-up work is most encouraging. This next year we will have a county nurse. The money has already been appropriated by the supervisors.

With this beginning we hope Washtenaw County will make definite progress in health education during the next year.

At this point, we interpolate the report of a survey of rural school health conditions in Washtenaw County, Michigan, as referred to by Dr. Snow. Miss Haskins of the University of Michigan, who was to have made the report in person, was unavoidably absent. As a graduate research student, this study was made under the direction of Dr. John Sundwall, Head, Department of Hygiene and Public Health, University of Michigan.

Survey of Rural School Health Conditions in Washtenaw County, Michigan

Paper by Miss Ida M. Haskins, Graduate Student, University of Michigan

The Field

IT is safe to say that there has been no more vital community welfare work done in recent years than that which has been done by various health agencies. All persons interested in any phase of health work are familiar with facts and figures which prove the unquestionable results of these health activities.

On the other hand, surveys and studies have been made which reveal some rather startling and significant facts. While there has been a great gain in health throughout the land, we must admit that it has been greater in the city than in the country. And the reasons for this are quite obvious. City people have the advantages of hospitals, clinics and doctors. They are surrounded by educational opportunities. Their milk, food and water supply are safeguarded. Their children are given medical examinations in the schools. Their housing and sanitation are standardized. The natural advantages which the rural districts possess in favor of healthful existence seem to be more than offset by the protection which the city dweller is given. Country people do not make the best of their advantages. Three-fifths or about twelve million of our school children attend rural schools. And so improvement of rural health in America is a tremendously vital problem.

Rural health work a vital problem

The particular problem and field with which this report is concerned is rural health in Washtenaw County. This is the

county in which Ann Arbor is located. It contains 720 square miles, laid out in 20 townships. With the exception of the two small cities, Ann Arbor and Ypsilanti, and the usual number of small towns and villages, the county is made up of small farms averaging from 25 to 200 acres in size. General farming, dairying and fruit raising are the principal industries. The same acute financial situation exists on farms in this county that one finds in other rural areas of the United States.

As to the health situation, with the exception of some work done by scattered individuals, the excellent work done by Dr. Glenadine Snow of the Michigan State Normal College at Ypsilanti, which, however, was limited to schools around Ypsilanti, and the health crusade work of the Michigan Tuberculosis Association, there has been no organized health project attempted for the county as a whole with a view to demonstrating what can be accomplished by a carefully organized and executed program of health education.

Source of Material

Facts and figures from 3 surveys

The facts and figures contained in the following pages have been collected from reports of surveys that have been made in the rural schools of Washtenaw County during the past eight months. Three surveys have been made as follows:

First Survey: A medical examination of all school children in the one-room rural schools and of those in the towns and villages in the county. This covered between four and five thousand children. This enterprise was carried on by the Washtenaw County Branch of the Michigan Tuberculosis Association, assisted by the Department of Hygiene and Public Health, University of Michigan, during the winter of 1924-1925.

Second Survey: Health habit study of the children of thirty-six of the rural one-room schools made by a student in the Department of Hygiene and Public Health, University of Michigan in the winter of 1924-1925.

Third Survey: Of buildings, grounds, general sanitation, teacher personnel, and the general educational status as reported by the Committee on Rural Education of the Michigan State Teachers' Association. Made in September, 1924.

Statement of the Problem

A real health project was started in the county in November, 1924, by the Washtenaw County Branch of the Michigan Tuberculosis Association in cooperation with the public schools. A medical examination was made of all school children in the rural and small town schools. This work was done by a physician assisted by the Secretary of the County Tuberculosis Association and certain students from the Department of Hygiene and Public Health in cooperation with Dr. Sundwall, head of the Department of Hygiene and Public Health, University of Michigan.

Study of health habits of rural school children

A study of "Health Habits of Certain Rural School Children" was undertaken in connection with the medical examinations above mentioned. The study covered the health habit histories of 621 children in 36 schools—all of the children in these schools except those too young to understand the questions. These 36 schools were all typical rural schools.

On the whole a study of these two surveys reveals with little variation the same results as those yielded in similar more extensive studies that have been made in other places as by: (1) Collins in his study of "Morbidity of children in Hagerstown, Md.," (2) Clark, Collins and Treadway in the survey of the "Dietary Habits of the Rural School Children of Porter County, Indiana," (3) Dr. Wood in his study of the "Physical Defects of School Children as Found in Detroit, Cleveland, and Boston."

The following summary is quoted from the study of "The Health Habits of Certain Rural School Children" of Washtenaw County, Michigan.

1. Group Statistics

The number of children questioned was 621. Of these 347 were boys and 274 were girls. Age range was from six to seventeen years. The largest group fell at the age ten. The largest group lay in the fourth grade with 114 pupils. The number of pupils in the first four grades constituted more than half the entire number studied. There was a marked decline in the number of pupils after the fourth grade.

The number of cases of communicable disease among girls was greater than that among boys. Diseases in the order of

their incidence were as follows: Measles, chicken pox, whooping cough, mumps, influenza, scarlet fever, pneumonia, diphtheria and smallpox. Only 7.8 per cent of the children had had no communicable disease. Statistics

Children were weighed and measured and standards judged according to the Baldwin-Wood tables. Three times as many girls were underweight as boys, and twice as many boys were up to normal weight as girls. More girls were under and over weight than boys. Age group thirteen showed the greatest number of both boys and girls underweight. The period of adolescence also showed the greatest extremes of over and under weight children. Age group six showed the greatest number of girls up to normal weight and age group ten showed the greatest number of boys up to normal.

2. Health Habits

Nutrition. The study revealed an ignorance of well balanced meals and of food values. Pork, pancakes and potatoes were the usual winter diet. There is great need for the teaching of the proper preparation and preservation of foods for winter consumption. Children ate an excess of starchy foods and 34 per cent had no vegetables in winter. Milk, as a rule, was to be sold, rather than to be used, and 24 per cent drank no milk. The larger number ate fruit daily. Forty per cent of the group used one or more cups of coffee every day and 21 per cent drank tea every day. Water consumption was low.

The Care of Teeth. Twenty-one per cent of the group either had no tooth brush or never brushed their teeth. Over 40 per cent, including many older pupils, had never been to a dentist. The condition and appearance of their teeth generally was bad.

Cleanliness. Inadequacy and inconvenience of water supply at home made bathing difficult. Nevertheless, three quarters of the group had weekly baths. Cleanliness of hands at school was not practiced and there was no obvious attempt to apply hygiene to conduct.

Rest. Over half of the children slept with windows open at night. Sixty-three per cent did not have individual beds and

slept with younger children. Many slept with parents. The hours of rest were adequate for the group.

Recreation. No organized recreation was offered in any of the schools. No attempt was made to teach physical education, with all it implies and involves. Recreation was spasmodic, undirected and limited in scope.

3. Physical Defects

Seventy-eight and four-fifths per cent of this group showed physical defects of some kind. Defects were found in the order of their incidence as follows: Tonsils, 41 per cent; defective teeth, 28.8 per cent; cervical glands, 21.7 per cent; goiter, 16.5 per cent; defective vision, 11.5 per cent and others of less prevalence. In general the results were lower than those recorded by Dr. Wood, the Porter County, Indiana, survey, and the Virginia study. This may be due to different methods of examination or to actually improved conditions.

The third survey

From the third survey, that of buildings, grounds, general sanitation, teacher personnel and the general educational situation, further interesting facts are gained.

Out of 137 schools, teachers from 127 reported on the information desired. The enrollment in these one-room schools ranges from five to thirty-three with an average of fourteen per school.

School Buildings

The median age of buildings is 52.4 years. Twenty of them were built more than sixty years ago; forty-one of them, between fifty and sixty years ago.

Toilets

Very unsanitary, some of them being vile.

Yards

Size-median was .65 of an acre.

Condition

78 show no evidence of community pride.
30 show some evidence of community pride.
1 shows superior evidence of community pride.

Third survey continued

Play Facilities

78 have no fixed apparatus.
77 have no hand equipment, as balls and bats.

Lighting of Houses

4 of the buildings are lighted from four sides.
40 are lighted from three sides.
61 are lighted from two sides.
7 are lighted from one side.

Heating

16 have furnaces.
42 have room heaters as the Smith or Waterbury.
13 have jacketed stoves.
42 have unjacketed stoves.
26 have stove located in one corner of room.
10 have stove located on one side.
46 still occupy the center of the room.

Ventilation

44 have no provision for ventilation.
53 have fresh air intake and foul air extractors.

Seats and Desks

Generally improperly adjusted.

Water Supply

33 have wells on grounds.
71 get water from a near-by farm.
41 have bubbling fountains.
21 have pails and individual cups.
34 have pails and common cup.

Washing Facilities

107 have wash basins.
3 have none.
23 have paper towels.
29 have individual towels.
50 have common towels.
5 have none.

Lunches

19 report hot lunches.
70 report none.

Products of the Rural Schools

63 had eighth grade graduates in 1924.
42 had none.
Of 66 girls who were graduated, 36 went to high school.
Of 69 boys who were graduated, 35 were in high school.

Teachers

Age-median was 22.8 (considerable variation here).
Residence, 100 of the 127 lived in Washtenaw County.
Social Activities:
49 of 127 reporting attend church.
30 of 127 attend Sunday School.
14 of 127 attend Lodge.
7 attend Grange.
1 attends Epworth League.
68 indicated that they did not participate in any of these activities.

Educational Situation among all Children

Standardized mental tests were given in arithmetic, language, reading and spelling. The results were typical of those found in the rural schools of the nation. The children of Washtenaw County were found to be below standard in every grade in every subject of those in which tests were given.

The summary above given of health conditions among children is based mainly upon the analysis of data secured from the 621 health habit histories. We are now in the midst of analyzing the results of the data in physical examinations with a view to putting on a program of child welfare in the county in the fall of 1925.

Plan of Procedure

Salesmanship

1. The method of procedure must be first of all, one of salesmanship. The idea must be sold to the teacher, the parents and the country doctor. They must see the value of health for themselves and their children.

2. Parent-teacher associations must be organized where none exist. There is much ignorance and complacency to over-

come before real cooperation can be secured from many parents. Their interest must be stimulated in the promotion of their children's health.

3. Such a program must secure the correction of physical defects and so will call for the closest cooperation of nurse and local physician.

4. It must include the establishment of good health habits. A student in the Department of Hygiene and Public Health of the University of Michigan is preparing a syllabus of health education for rural schools. This will be placed at the disposal of every teacher and will provide her with the fundamentals in hygiene and health education which she will need for the proper appreciation of health and the health practices which she will seek to stimulate in her pupils. It will also contain a variety of health projects which will aid her in securing the establishment of those daily health habits.

Choice of Schools

The County Commissioner will choose a certain number of the schools—probably eight or ten of the county—for demonstration the first year. Sufficiently tangible and concrete results should be gained from this number to demonstrate the value of health education to the entire county.

It is the purpose to connect this program with the University, especially with the School of Education and the Division of Hygiene, Public Health, and Physical Education. Thus in addition to rendering a genuine service in the way of laying out a program for the promotion of health education in rural communities, it is the purpose to utilize the program as a teaching experiment and the schools as a laboratory in which to determine what are the essentials in a program of health education.

A laboratory for the University

Chairman:

We should like to hear more accounts of rural work, even though not so complete as this fine investigation. Miss Smith, won't you tell us something about what you are doing to help the rural school teacher to do her work in Indiana?

Miss Marjorie O. Smith, Director, Child Health Education, Indiana Tuberculosis Association, Indianapolis:

I do not feel we can force things, ever, on a teacher, especially on a rural school teacher. Everything we have done in trying to introduce health teaching into the rural schools is to give them an idea, if it is only to hang up some sort of chart or a little health picture, and encourage them to come back and ask for something, some method, some way of teaching health.

We have our county teachers' institutes to which all teachers under the county superintendent have to come every four weeks for a whole day's institute. Last year I took two counties I had never been into, and as far as I could find out, there had been no nurse, no health worker, at all, in any schools in that county. I gave just one talk. It wasn't such a good talk, but it gave the teachers an idea. I put up on the board our address, and I said, "If any of you teachers want any material on health education, this is the address." That was in our district institute, just before Christmas, and 35 to 50 per cent of those teachers have sent in for material.

Miss Grace George, Assistant Professor of Hygiene, Central Missouri State Teachers College, Warrensburg, Missouri:

Central Missouri State Teachers College, Warrensburg, Missouri

You may be interested in the work we did when the trachoma clinic came to our city and our county. The nurse who went ahead of the clinic could not find any one to advertise its coming. She happened to meet me and asked to whom she could go for assistance. I had a class of fifty-eight teachers. So knowing that they went home over the week-end to the adjoining counties and through the country, I told her that we would see if we could do something. These teachers wrote letters to doctors. They saw that advertisements were put on at the picture shows. They nailed up the signs on the trees on the road home, so the clinic was well advertised and most successful. It was the teachers in training who advertised the clinic.

Chairman:

Is there anyone who will add some observations on rural work?

Miss Phelan:

I wonder if our experience with the rural school clinics might be of interest to teachers. Briefly, a few years ago we organized our township for a school clinic for all the rural schools in the township. The clinic day was set, the school board declaring that "Clinic Day," and the children were given credit for attendance. The Farm Bureau women or the Ladies' Aid, or any other of the women who were foremost in that particular township, were organized into a health clinic committee and took charge of the work, helping to get the children ready for the doctors, preparing the lunch for the workers, helping with the clerical work.

Clinic Day

The one clinic you might be particularly interested in was held March 3d in Weil County, after two weeks of rain. Any of you who know Weil County know what that means. Everybody gathered, children came in wagons, on mules, and some in cars, and many afoot. Those who came afoot had to leave their boots outside the door. In fact all the children had to be admitted into the house through the cellar door, and take off their high rubbers and outside clothes.

The doctors, dentists and nurses, a volunteer group from the County Medical Society and the Visiting Nurses' Association in a neighboring city, and a volunteer group from the Dentists' Society, gave the examinations. The examinations in each township usually took about a day.

We felt that aside from uncovering the health handicaps of the children, it gave the basis for follow-up work, and made the clinic a part of the social life of the community. It was one of the biggest health educational factors that we could possibly use. In that particular community, a survey made in November showed that 75 per cent of the handicaps uncovered in that March clinic had been removed.

Chairman:

I think you are directing our attention to one of the most vital problems within the range of the entire Conference.

I wonder if any of you know the reports on rural health in the list of our Joint Committee bulletins. There are three on

Joint Committee Bulletins

rural school health: (1) "Minimum Health Requirements for Rural Schools," (2) "Health Essentials for Rural School Children," and (3) "Health Improvement in Rural Schools." This little report, which you can still get for a quarter from Washington,[2] gives the result of a rather careful study of the country five years ago, and it would give a very good basis for the study of this problem of existing factors or agencies in rural communities, which may be utilized for health work in rural schools.

Miss Genevieve Lill, Supervisor of Health Education, Wichita Public Schools, Wichita, Kansas:

Has anybody said rural school children sleep less than city school children? My brother lives in the country. His children go eleven miles to school. They leave home before eight and get home at five. They are always tired. I wanted to give them a radio for Christmas; my brother said, "No, we have to chase them off to bed as soon as it is dark, so they can get enough rest." Over in our state, which is Kansas, there are a good number of children who go twenty miles to the consolidated schools. They give the children hot lunches but I never heard of giving them any opportunity for rest.

Chairman:

Any training course ought to be broadened, perhaps, so as to differentiate these peculiar conditions affecting the children in rural schools of which the teacher ought to be cognizant.

Miss Rood:

Several of our teachers have expressed a preference for a half-hour noon period, so as to distribute the hour or more ordinarily taken for the noon period, over a longer recess period. The children could rest more then. Besides, an hour at noon introduces a great many social problems in the rural school, especially if the school is located near a woods or is in a place where the children wander away from the schoolhouse. They need the constant supervision of a teacher.

[2] National Education Association, 1201 Sixteenth St., N.W., Washington, D.C.

Chairman:

Dr. Snow, do any of the children in any of your rural schools have to take so much time going to and from school that it brings up a special problem?

Dr. Snow:

We do have the special problem of needed rest. In a particular rural consolidated school, I think no child has to go more than seven miles, but sometimes we have as many as fourteen schools consolidated. One difficulty is that the children rise at four o'clock in the morning and help with the morning chores before they come to school. I have had numbers of boys and girls unable to take any gymnasium work through weariness, and I have put them on cots instead of putting them on gymnasium work. We do have that problem very largely in our rural schools.

Fatigue and rest

Chairman:

A study of the special conditions affecting fatigue of rural school children is certainly called for by such conditions.

Miss Phelan:

There is another study I would like to see made, that is the relation of the transportation of children to the health of the children.

Chairman:

Does it involve much more than the question of fatigue?

Miss Phelan:

I think it does, Dr. Wood, especially in the case of those children who go in a crowd eight or ten miles in a poorly ventilated wagon.

Dr. Holmes:

A question in regard to consolidating schools is certainly the subjection of children to certain hardships that they never had before, standing in exposed places waiting for these automobiles or wagons to come along and becoming fatigued and tired.

Miss Phelan:

Transportation

The transportation also determines the hour the children have to get up, often whether or not the child shall have his breakfast, often whether or not he sees his parents at all during daylight hours.

Chairman:

A study of the effect of transportation of children to rural schools upon their health, is also indicated as needed.

Miss Harris:

I think it would be beneficial if there could be a study made of satisfactory methods of handling the hot lunch in small schools. Everybody expects it to be carried forward, but there are very many difficulties, and it might be a very helpful thing for institutes, if they could get a study of methods and the materials usable in the small rural schools.

Chairman:

A study of successful methods of conducting the school lunch in rural schools is also called for.

Summary of Section II, Topic 6

CONSIDERATION OF RURAL PROBLEMS IN TEACHER TRAINING FOR HEALTH EDUCATION

A SUMMARY of the thought of this section developed the following points, and suggestions for needed research, as a means of improving rural school health work.

Additional Training

Not only should a consideration of the personal health of teachers, community health, and objectives and methods in health education of children, be included in the health education courses of study for rural teachers, but also consideration of additional problems inherent in rural life with which the city teacher is seldom confronted.

Some of the Rural Problems

1. The practical application of lighting principles, color of walls and ceiling, the size, shape and location of windows, cost and value of various window shades, etc.
2. The practical application of heating and ventilation principles including the jacketing of stoves and arrangements for intake of air.
3. Sanitation problems, such as cost and value of various types of toilets; mosquito control.
4. Ways and means of instituting control of communicable disease while seemingly isolated.
5. Various methods for securing correction of defects when far from clinics.

It was recommended that the emphasis on any phase of health education in a given community should be determined through knowledge of actual conditions in that community. In order to determine the major emphasis, the normal school should make contacts with sources of information such as county health department, county nurse, county superintendent of schools and school principals, farm and home demonstration agents. The following needs were emphasized:

1. An opportunity should be given in student life, observation and practice, to conform to the principles in health as presented in the subject-matter courses in the normal school.
2. Opportunity in the normal school for the development of leadership in rural school activities. More rural sociology and psychology would help in this.
3. Increased use of the case method of handling health problems such as the discovery of a diphtheric child with no means of transportation at hand.
4. The timely use of local situations along with other materials in teaching subject-matter.
5. A wider opportunity for participation in health examinations, school inspections and protective procedures in the field of health.
6. A closer relationship established between the student teacher and the existing health agencies.
7. Definite training in correlating health work with textbooks used in all subjects.

For studies, see Recommendations, Section on Investigations, Nos. 10, 11 and 12, and Section on Research, Nos. 4 and 5.

In addition to those serving as chairmen of Section II, the following persons participated in preparing the Summaries of the Section:

Miss Lucy Oppen, *Secretary*
Miss M. Elizabeth Barker
Miss Juliet Bell
Miss Emma Dolfinger
Miss Theresa Haaga
Miss Cara L. Harris
Mrs. Florence Hobson
Dr. Abby Holmes
Miss Marion O. Lerrigo
Mr. Harvey Long
Dr. John D. McCarthy
Dr. William B. Owen
Miss Anette Phelan
Miss Katharine Pritchett
Miss Lydia J. Roberts
Miss Elma Rood
Dr. Glenadine Snow
Miss Mary E. Spencer
Miss Mary E. Sweeney
Prof. C. E. Turner
Mr. E. F. Van Buskirk
Dr. Stella B. Vincent
Dr. Thomas D. Wood
Miss Mary M. Wyman
Miss Laura Zirbes

Recommendations from the Section on Teacher Training for Health Education

SUGGESTIONS for constructive study, investigation and research arose out of the discussions dealing with the preparation of teachers for health education.

Constructive Study

1. A study of what constitutes adequate housing standards for student-living, covering—

   a. Feeding of students.
   b. Plan of school grounds and buildings.
   c. Structure of building (covering points of safety, energy-conservation and sanitation).
   d. Furnishings and equipment of building.
   e. Care of buildings and grounds in relation to all the above health needs of students.
   f. Adequacy of living conditions for students not resident in school buildings.

2. The development of health tests for teachers in service, involving habit, attitude and knowledge, in order to provide a basis for organizing courses of further training for teachers in service.

3. The development of a technique for determining base lines in relation to which health education work in any given

community may be planned, and progress measured—such base line to include physical status of children and the environing conditions.

4. Such an organization of child study courses as will afford laboratory experience for student teachers in observing child behavior with reference to the child's physiological, psychological and social ages and needs.

5. The establishment of a clearing house through which workers in health education may be kept in touch with significant activities and progress in the field.

Investigation

1. Studies of plans for administering the health program in teacher-training institutions to discover types of interdepartmental health coordination and their degree of success in securing—

   a. Coordination.
   b. Dynamic organization of subject-matter.

2. An analysis of current student loads with a view to determining the distribution of time spent in work, rest and recreation for the purpose of establishing satisfactory type schedules.

3. An investigation of such personality studies as have been carried on to date with a view to—

   a. Discovering procedures and personnel best fitted to carry on such studies.
   b. Uncover the value of such studies in bringing about a satisfactory adjustment of the student.

4. An investigation and analysis of typical plans for health examinations of students for the purpose of developing types of examination more nearly adapted to—

   a. Producing immediate improvement of student's health.
   b. Producing maximum educative effects in conservative and protective health measures.

5. Investigation and evaluation of existing courses (required and elective) contributing to health in relation to the following:

   a. Accuracy of subject-matter.

b. Organization of subject-matter to further the health aims of the institution.

c. Degree to which the courses given are paralleled by opportunities offered by the school to practice the theories taught.

6. An evaluation of varied ways and means of giving aid, instruction and training to teachers in service.

a. In particular—What new courses need to be given? How shall they be organized and related to actual school practice?

7. A study of the effectiveness of teacher training courses as indicated by the comparative effectiveness of health work done by young teachers who go out from teacher-training institutions.

8. Study of existing practices in evaluating student work in health education classes with a view to establishing criteria for determining the part actual student health improvement and the student's effort in this direction should play in total credit.

9. Collection and evaluation of child studies and researches from the points of view of anthropology, physiology and psychology in order to give basic material for the organization of courses for teachers.

10. A study of existing organizations in rural communities which may be utilized in promotion of rural school health program.

11. A comparative study of satisfactory methods of conducting the hot lunch in the small rural school.

12. A study of measures directed toward the more effective control and prevention of diseases in rural schools.

13. A study to determine who is supervising health education and the training of such supervisors.

14. A study to discover training being given in professional schools for supervisors of health education.

15. A study of health status, customs and existing conditions influencing health of teachers in service.

Research

1. A study of the actual physiological requirements of growing children on various age levels.

2. An investigation of the relationship between health and scholarship with particular reference to the effects of improved health on scholarship.

3. A similar study of the relationship between health and school attendance.

4. A study of the special conditions affecting the health of rural school children, such as isolation and customs of field labor, early rising, etc.

5. In particular, a study of transportation to and from rural schools, to determine the effect of the various factors involving health.

6. The construction of a scale for ranking teacher-training institutions in accordance with provisions made to further well-being of students. The scale should include—

a. Physical environment.
b. Standards for health examinations and follow-up.
c. Student health as evidenced by improvement in standard of student health or living.

Section III

MATERIALS FOR HEALTH EDUCATION

Chairman: *Miss Mary E. Murphy*
Director, Elizabeth McCormick Memorial Fund
Chicago, Illinois

Secretary: *Miss Anne L. Whitney*
Staff Associate, Division of Health Education
American Child Health Association
New York City

Topics:

1. What Are the Materials Used for Health Education?
2. What Educational Criteria Should Be Used in Evaluating These Materials?
3. In Relation to These Criteria, What Existing Materials Are Suitable for Use in Secondary Schools?
4. What Materials Are Useful in the Training of Teachers?
5. What Materials Are There for Teachers in Service? This Includes Both Those Useful for Teachers and Those Suitable for Children.

Summary.

Topic 1: WHAT ARE THE MATERIALS USED FOR HEALTH EDUCATION?

Critical Analysis and Evaluation of Material

Chairman: Miss Mary E. Murphy

Chairman:

I KNOW that there are in this group people who are going to help the Section move forward in the direction in which it should go, and that we shall have many very valuable contributions.

I feel, moreover, that this is a very strategic time in the history of health education. It is rather interesting to look back at the other conferences and to see the steps that have been taken. We argued first that there should be health education, and that the teachers were in the strategic position to carry it forward. Next we discussed the methods and how teachers could be trained.

We are no longer in the propaganda stage of trying to convince the world that health education is necessary, or that teachers can carry it forward, but we are criticizing. We are having this particular meeting in the hope that we may make a contribution in the form of a critical analysis and evaluation of materials. I can think of no one better fitted to open the discussion than the *Chairman of the whole Conference, Dr. Thomas D. Wood.*

Dr. Wood:

Instead of plunging into an arbitrary presentation of ideas regarding materials, it would be well to stop for a moment to find out why we need material and to what this material is to be related.

My thought falls in with what Dr. Bobbitt said to us yesterday. Our problem in education, and our specific problem in health education, is to help children live wholesome lives, to help them to live abundant, sound and worthwhile lives. That is my definition of health.

Definition of health

I should like to say that the only point that disappointed me in Dr. Bobbitt's presentation was his implied limitation of health to the physical well-being of the child. In the report of our Joint Committee on Health Problems, you will remember that it is very definitely stated there that health includes the physical, mental, social and moral aspects of life. I cannot think of health more narrowly than as a real synthesis or composite of these factors. Even with reference to the physical health of the child, it is apparent that the significant variable factors are not physical factors; they are the mental processes, the emotional processes, and the social reactions of the child in relation to his physical life. Therefore, my suggestion is that we keep these factors closely integrated, in a unified concept of health.

A unified concept of health

Children are not primarily much interested in living in accord with the terminology that Dr. Bobbitt set up, or that I have suggested to you this morning. They want to live their lives in terms of different objectives, goals or directions than we grown-ups are apt to explain for them. May I say, then, that before touching on the problem of materials, I believe we have no more important task, as teachers, than to try, parallel with our own principles and aims and objectives, to find out the aims, objectives and goals of the children themselves in different stages of their growth and development. We never shall be successful in selecting material, or determining methods, until we do this. We have many extended studies to conduct before we can be sure even of those fundamental elements. In this connection I am greatly helped by a statement of the function of the secondary schools which I quote from Professor Briggs. He says, "The function of the school is to help young people to do better the desirable things that they are likely to do anyway, or that they are likely to want to do anyway." Therefore, I wish to suggest with reference to materials that we must not bribe them to live wholesome lives. We must not use any kind of materials that involve inducements as distinguished from incentives. These children have inborn the capacity, the mechanisms for acting wholesomely, for living wholesome lives. If they did not we could not do anything. Therefore we must select materials, determine methods, and assist the teachers to

get their professional training so that they can exert their influences in harmony with the simple, fundamental principles.

I was delighted with Dr. Bobbitt's statement that the curriculum is activity; that there are no extra-curricular activities; that the education of the child involves 168 hours a week. Nothing more true was ever said.

The facilities in the child's environment

Now our materials involve several different types. Of fundamental import in the materials for health education are the conditions, the facilities in the environment of the child at school, at home, and in the community. We preach cleanliness, for example. It is very irrational for us to preach cleanliness for the home and school unless there are water, soap, clean towels and the materials with which the child can keep clean; unless the conditions of the home and the standards of living in the home make possible, clean clothing. We must give more attention to the social, the economic, the housing conditions and the standards of living with reference to health education. We are, in most schools, advocating the washing of the hands before eating, and yet few schools have the facilities to enable the pupils to wash their hands. The schools quite inconsistently lack the materials for health education.

In health education we advocate the best standards of food, proper selection of foods as well as regularity of eating. Suitable food must be available and obtainable, or we accomplish comparatively little. There ought to be in every school that provides a luncheon, the example of a luncheon that complies with all of the nutrition requirements. When we have the cafeterias or lunchrooms where the children are given a chance to choose, then we must have more materials to help them choose wisely. I never have seen a school where all the conditions affecting the lunchroom were set up to make a complete set of materials for health education.

We preach sleep. But do we do everything that we can to improve the conditions for rest and sleep, in air and space and quiet, not only in the school, but through influence upon the home? I am convinced, myself, that the community is far more culpable than we realize in failure to provide the conditions for the efficient rest of childhood.

We preach activity in health education. We must have, as

the fundamental material condition, space—play space and enough equipment for interesting and wholesome play.

We ought to be sure, fundamentally, of sound, wholesome materials in the environment, the surroundings of the children, for their health education.

What are the principles for determining the validity of materials? How can we set up any basis of discussion regarding the selection of materials for health instruction? It is apparent that, for the younger children, more important than the books are what we may call the rewards, the credits, that are closely related to motivation. Health education involves habits, attitudes and knowledge, these three elements. Younger children are much more influenced by subtle motives than they are by scientific knowledge. Therefore, the selection and the control of these motives to which the children are so sensitive is of the greatest importance. We ought never to forget that, after all, human beings, whether children or adults, do things because of certain satisfactions which they get from so doing. Those satisfactions lie on different levels for different types of children of the same age, and for the different ages; but the fundamental basis is satisfaction. I think we are prone at the present time to overemphasize and to overstimulate children by the elaborateness of the program of rewards outside of the intrinsic satisfaction of the children. We must remember that the satisfaction in action, the joy in doing things, which is characteristic of the healthy child, is only one element. Children from very early years are sensitive to social approval. We have that in the attitude of the child toward the parents, and of the parents toward the child.

Now as we come to the question of material that appeals more directly through the senses by carrying certain information, we have the whole range of books, pictures, charts, models, slides and moving pictures. What is sound? What is the principle that is to guide us?

Practical restrictions

Let us think of the practical restrictions that we have, in the first place. Whatever we use in a particular school must, to some extent, conform to the general program, the course of study and the materials in present use in that school. I should like to suggest that in this field of health education, you try

always to combine, to harmonize your idealism with practical common sense. You never will realize your ideal, but if you keep it you can gradually help to modify the practical program of expediency toward your ideal.

We are limited in the next place with reference to the course of study. I have talked recently with three young people who have been working on a course of study for a certain state, and they stated very frankly that that course of study was definitely restricted because it had to conform and adjust itself to required texts and to state-adopted materials. That is one of the definite, practical limitations.

My own fundamental ideal for the elementary school is that we should have a complete program of health education without having any book that is exclusively a health book. That is, however, impossible. Why? Because if we did not have a period devoted to health in the curriculum, even in the elementary schools, if we did not have definite books, health would be neglected almost entirely. Therefore, we again must be practical.

In the literature in this field of education, there is a rapid increase of the correlated material. The people who are making books in the general fields are becoming acutely aware of the opportunity and the practical wisdom of making use of the popularity of health. Nobody knows just how effective these correlated materials will be, as distinguished from the book especially set up to teach health.

Our materials should come from sound sources. Now what are sound sources? Are all the books that are prepared by the commercial publishers of textbooks sound? In any particular state the book that is adopted for use in the local school or in the state program must be accepted as essentially sound whether we think so or not, and we must treat it with great respect. We may be able to supplement it. I have taught, for example, First Aid from a textbook that had several errors in it. I have tried to have my students keep an undisturbed respect for the book, and at the same time I have tried to revise their ideals with references to isolated points in the book that were out of date. I think we must keep this in mind. The materials that come from our official health associations and authorities we must consider sound in providing constructive material.

Sound sources

While I have emphasized conduct, let me call your attention to the great significance and importance of attitudes in determining conduct. I have the greatest respect for the gradual development in the possession of the child of a body of information regarding health, the development of a scientific mind, of the scientific attitude toward health, which is of the highest importance in this whole field of health education.

Chairman:

I am very eager that we should hear at this point from Miss Dolfinger, who has not only a very worthwhile point of view, I am sure, on this whole subject, but has also had wide experience in using and developing materials in a health education program herself.

Miss Emma Dolfinger, Director of the Division of Health Education of the American Child Health Association:

In my judgment you cannot teach habits much by books. Rather, equipment for activity is essential. Much that is in the truest sense health education material, is fundamental school equipment.

I think the time will come when no school architect will think of building a school without providing adequately for health facilities, and when the administrators will no more think of considering the equipment complete without adequate toilet paper, towels and soap than he will think of considering it complete without chairs, desks and blackboards. I consider, in other words, the materials with which *to do*, in relation to all the phases of the child's physical being, as the only form of equipment or material very useful in habit forming.

Materials with which to do

When it comes to the formation of attitudes we can use a great many of the things that we more commonly think of as materials. In the first place, I should consider as such materials, those things that increase a child's experience, that give him a chance to participate, that stimulate activity of one kind or another, and that offer him a chance to test himself out in conditions that may lead to personally or socially healthful behavior. Such material might include plants and animals for the child to care for and play with. He should have a chance to

see animals and plants grow, and to be responsible for giving them the conditions under which they will develop. He, incidentally, gets a great deal of knowledge that way.

There is another source of great value for material of instruction, in our institutions, our factories, hospitals, food manufacturing plants or city water plants. These provide opportunities for instruction useful in the very highest degree. It is in relation to such actualities that a child learns best. The value of the printed page is to supplement, to correct, and to increase the primary experiences and points of view that a child gathers in coming in contact with something real.

To still another group belong the made models of one kind or another which a child can handle and take to pieces. Here too, belong the raw materials for building up his own models, in order that he may test out the accuracy of his idea of a thing by making it in some concrete form. I think of slides, movies and books in somewhat the same connection.

Current sources of information

I believe that the sources from which children get their knowledge should be similar to those to which adults are accustomed to go for information. That is to say, newspapers, magazines, the bulletins which come from the various research institutions, the materials which come from our Government departments, the federal, state and city boards of health, the reports of the state and federal extension services of the universities and land grant colleges—all this seems to me to be printed material of the highest importance. Textbooks are important because we have to have something to anchor our boats to. But we must not expect to get good results either on the knowledge side or on the attitude side, from giving the child the impression that everything of value is contained within one cover. When a textbook is used, it seems to me it must be supplemented from these other current sources. Should we not lead students to see that they can get more effective knowledge about the control of contagious diseases, through reading and studying the health reports of their city, or reading what comes from the United States Public Health Service, than from reading one textbook and that, perhaps, a very ancient one? Such current material has a quality of reality which, I have observed, carries more weight than the textbook which to the child's mind, is not

directly related to something that is happening now, in his own town.

Current material is valuable. Fundamental to its value, however, is the possession by the person using it of sound standards of value. The source of your material is unimportant, in comparison with the criteria by which the teacher selects. I am sure it is of fundamental importance that every teacher be trained from the beginning to discriminate between reliable and unreliable sources of material. In choosing her material she must be sure that it is scientifically accurate or she must know whose judgment she may safely seek on the matter. She must be familiar with certain educational criteria so that she may judge if the material is presented to the child in such form that he will get out of it what she hopes for. Certain kinds of material are useful in one situation that would be wasted in another, and the difference often lies in the way in which that material is presented. So we need clearcut standards in relation to which we are to judge the flood of printed material descending upon us. The teacher must have these criteria, so she may choose wisely from all the state, federal, national and private sources now offering material so richly. If material squares with these criteria it cannot do harm.

Finally, I should like to raise some questions for the consideration of this Conference on materials. Do we know what children need to know in relation to health at given ages? Do we know what they want to know? Those are two important things.

Needed knowledge and wanted knowledge

For instance, it ought to be possible for us to find out what facts in relation to the preservation of personal health, and in relation to the development of socially healthful attitudes, will tend to make a child a civilized member of society. What does a child in elementary school need to know to rationalize his behavior? What knowledge should he have? If we know these things we can hope to select and prepare useful material.

Moreover, we should know what a child wants to know. Children do have definite curiosities about certain things and the information which they pick up on these subjects will stick.

Chairman:

Miss Dolfinger has certainly set us forward many steps in making us realize that curriculum is activity. I feel that we

cannot overemphasize the point that there is a great deal of material available, pamphlets, advertisements, bulletins of various kinds coming from official and nonofficial sources, and some of this is well made up and some of it is not. After all, it does come back to the standards of the person who is conducting the work.

Topic 2: WHAT EDUCATIONAL CRITERIA SHOULD BE USED IN EVALUATING THESE MATERIALS?

Chairman:

WE shall move on now to the second topic: What educational criteria should be used in evaluating the above points?

Miss Lerrigo has made some study along this line, with special reference, I believe, to textbooks. We are very eager to hear from her.

Miss Marion O. Lerrigo, Research Assistant in Health Education, Teachers College, Columbia University, New York:

My greatest amount of experience has been rather in analyzing courses of study than textbooks, but I have also had something to do with the evaluation of textbooks and reading materials of various kinds. I have been fortunate enough to know something of the work that the Teachers College Bureau of Elementary Curriculum Research is doing at present, and I find that the principles which they are using in the evaluation of courses of study have been those which some of my colleagues and I have also found particularly valuable for textbooks and other reading materials. So I want to present this morning a half-dozen of the important principles of evaluation that are used in that piece of research, and which I have also used. Many of these have been spoken of already by Dr. Bobbitt, Dr. Wood and Miss Dolfinger, but perhaps just a brief summary will fix them in your minds.

Important principles of evaluation

In the first place, we find it useful to inquire what is the underlying philosophy of the material in regard to two points, health and education. Is the attitude toward health a positive attitude? Does it consider health as merely physical, or as mental, social and moral? Is its attitude toward education that

of improving the quality of human life, or does this material consider education merely a process of storing information or preparing the child to live when he grows up?

Underlying philosophy and adaptability

After we have considered the underlying philosophy of the material then we ask, "Is it adapted to the needs of the group for whom it is intended?" Usually the chief difference in groups will be those of age and development. If there is a series of textbooks, we should see that the various levels of the textbooks are adapted first in vocabulary, and second, in the difficulty of the ideas to the different age groups. Young children, of course, understand and appreciate the concrete much better than they do the abstract or generalized idea. It is almost impossible to use the latter successfully until the children reach the high school age.

It is important in considering a series of textbooks to know what is the basis for progression. We like to use the word progression rather than gradation, because it is hard for us to know what grade a thing should be placed in; but if we have a planned series of tests it is relatively simple to see that they do progress. They should progress with regard to the changing health needs of the child and with regard to the enlarging responsibility which children should assume as they grow older. Young children do not have a great deal of responsibility for their own health conditions, but as they grow older they should assume more. Materials should also progress, we believe, with regard to interest in a continually enlarging community. The child is at first interested only in his relatively small group, but by the time he reaches high school he should have a comparatively greater interest in national and civic affairs. Another question of importance in adapting the materials to the needs of the group is whether or not it provides for individual differences; that is, whether or not there is additional reading matter, if the book is a text, for the bright child who does not find enough work to do in the text during the course of study.

My next point is this, quoting Dr. Bobbitt again: Does this material encourage self-guidance? Some material is prepared in a form which does not stimulate thought. It does not stimulate a problem-solving attitude. In this connection we ask, "Does it encourage self-guidance by giving scientific background

or by presenting some practical hygienic application of science, such as rules for brushing the teeth or taking a stimulating tonic bath, or choosing one's diet? Or does it create an interest or an attitude?" Now all of those things are not always found in the same material.

After going over rather a large mass of material I found that stories and plays very rarely contain any amount of scientific information. They are very useful in creating attitudes, and they have a fair amount of practical hygienic information in them. In the textbook and the more formal material is found scientific information. In using various kinds of materials, then, it is well to know what you expect to get from them.

My next point refers to the basis on which the selection of subject-matter included in the material is made. Is it made on the basis of the author's opinion, or a committee's opinion, or in relation to standards rather automatically set by what has been previously included in other materials? Is the selection made upon a study of needs of children of a certain age, or upon a study of national health needs? If the selection is made upon a basis of the author's opinion or a committee's opinion, we need to know what is the standing of the author or committee. I should like to say, in regard to the selection and organization of the subject-matter, that in going over ten sets of health education materials, coming from ten different classrooms, we found twenty-two different major topics of interest. Now, only two of those topics appeared in all ten of these sets from different classrooms. That might indicate either that the teachers who had studied the different needs of their children had found that those needs differed a great deal, or else it might show that there was not any very rational selection of subject-matter.

Scientifically accurate subject-matter

I have heard it said that the average hygiene textbook is about 80 per cent accurate. I do not know whether that is so or not, but that brings in another criterion which we must have. What is the quality of the informational subject-matter which it contains? Is it scientifically accurate? Is it of practical value, or is it of psychological value? Now it is possible, I think, for informational subject-matter to meet all of those standards, but it is not always done.

My next point relates to the social value of the subject-

matter. Does it emphasize only personal health? Does it call the child's attention to the well-being of his contemporary community life? Does it create an attitude about the future well-being of the race? We found that perhaps something less than one-third of the material has any social or community attitude involved. Now that is a rather generous estimate, because we counted in such statements as this, "If you keep yourself well you will be a better citizen," and that is perhaps as much a personal as it is a community point of view.

The arts in health education material

Lastly, I wish to make this point. In the materials which we use in health education, some other art is always involved. In posters there is the art of poster-making; in textbooks there is the art of book-making; in plays there is the art of play construction. I think we should always examine our materials to see that they maintain the values of these other arts.

In conclusion, let me say that I do not mean that we shall discard, by any means, the materials which fail to exemplify all of the principles or criteria which have been mentioned, but I think we should examine our materials with reference to criteria, either these we have been discussing, or others which you think are valuable, and know what are the good and what are the weak points of the materials that we use.

Chairman:

There is a great deal for discussion and thought in what Miss Lerrigo has presented to us but we will move on with the hope that we may come back for that discussion.

We want particularly to hear from Miss Zirbes of the Lincoln School, who has made a study of educational criteria, with special reference to reading.

Miss Laura Zirbes, Lecturer in Elementary Education and Investigator in Reading, Teachers College, Columbia University, New York:

I am more interested in the production of materials than in their use. By that I do not mean that I am not interested in their use, but that my particular individual function seems to have more to do with the production of materials.

In speaking of the reading aspects of material I go back to my own special field. Concerning the material on health education we then ask, "Does it really function? Does it really educate? If these children are to read this material as health education material, what is its value from that standpoint rather than from the standpoint of a reading investigator? Does the material 'get across' to the extent that the children are changed in their point of view toward health and in their health conduct? Does it get them to act, to do the right things?" These are the questions which interest me and not whether the children have a good reading rate when they read the material.

If we conceive of education as a change toward fuller living, then the educational criterion is: Does the material produce the desired change? How does it affect the child? I think the first consideration in material that has so serious an objective as health education is its contribution to the attainment of the aims of health education. Does it secure reactions that tend to make the child dynamically interested in the things that will make him healthy, that will improve his own physical and mental well-being, and make him a person who has the right attitude toward the health of others in the community? Is it dynamic? Does it secure reaction? If it does not do that then I do not think it is the best material. Is it just stuff calculated to be read and recited upon? I think we have altogether too much of the latter. There is not enough material that is dynamically effective. Material is not merely the stuff between covers. It must be primarily an assistance to the teacher and to the child in setting up activities, in getting reactions and in coordinating the health activities of the group.

Does the material secure reaction?

If we will just stop thinking of the matter as one of instruction, assignment or lesson learning, we will get nearer to the basis upon which the work must be done, if it is to be effective in the desired direction. That is, what does the child do? How can this material make him do the things that he should do? After all, learning is not memorizing. It is not securing knowledge. It is getting broader insights, having truer feelings toward things as they are, toward causes and effects. The child who is being thus changed in his values, in his insight, in his tendencies, is being educated far more truly than one who is being crammed

with well-organized, systematized knowledge, fed to him by the spoonful.

If we want this material to be truly educative it must not be kept by itself in a little subject-matter cubby-hole but must filter through the whole of life. We must, then, be careful to have our materials relate to the child's life primarily. They must not merely deal with health for health's sake but with health as it pertains to the various activities and interests of child life. To evaluate materials in that way we cannot examine the textbooks; we must examine the child's behavior. We should be much more interested in finding the actual evidence of the activity produced through the use of the textbook than in examining the child on the content of the textbook or examining the textbook itself. It may be crammed with what the textbook maker considers adequate stimuli, but if they do not work, they are not stimuli. Any health education textbook that stops when you get to the last page, that does not carry over into further activity is missing the mark.

Child's behavior good evaluation of material

As you observe the activities of the child, you, as a teacher, analyze and say that this activity is leading to habit formation; this activity is leading toward a desire for knowledge and a search for knowledge, and more knowledge; this activity is leading the child to see when things are wrong, to take a dynamic stand and to a decision to do something when they are wrong. You try to find ways of relating the text to something here and now that is definitely related to your pupils. It seems to me we need to acquire this ability to supplement the shortcomings of the textbook in producing effects.

To me those are the criteria that we should apply in order to see whether our health materials are truly educative. If I were asked about reading criteria I should go to another department of my thinking. I should examine the material to see whether the vocabulary is such that the child would understand it. I should ask whether the material is good reading matter and whether it meets hygienic standards. These points have been brought out by a previous speaker and need not be restated.

I have emphasized printed materials. Accessory materials of all sorts should meet the same tests. Pictures, posters, ap-

paratus of all sorts, to be valid and acceptable should further the threefold program of health education.

Chairman:

Miss Zirbes has referred to the statement that Miss Lerrigo made with reference to the other arts. I was much interested by what she said. When we think back about some of the arts we have exploited in the name of health education, it makes us wonder whether we, in accomplishing one purpose, have not done damage that is very serious. Health includes not only physical health, but mental and spiritual, one factor of which, surely, is appreciation of fine things.

I believe that as one field goes forward in evaluating its own material, possibly these fields of social study and health material can move forward somewhat back of the other, but along more or less parallel lines.

Topic 3: IN RELATION TO THESE CRITERIA WHAT EXISTING MATERIALS ARE SUITABLE FOR USE IN SECONDARY SCHOOLS?

Chairman:

OUR next topic is: In relation to these criteria, what existing materials are suitable for use in secondary schools? Miss Harris, I am sure, has a contribution to make in connection with this topic because she has been carrying on a good many projects with the use of various types of materials.

Miss Cara L. Harris, Director of Health Education, Rutherford County Child Health Demonstration, Murfreesboro, Tennessee:

Need of health material for secondary schools

I am not quite clear from just what angle I should attack this problem, but I can say at the start that I have felt the need of materials for secondary schools very strongly this year. For instance, in dealing with some high school courses I found it very difficult to secure material to help the students to visualize the thing that I was trying to help them understand. I felt that if we could get more illustrative material that we could rely upon as being absolutely sound to use in high school classes it

would be of distinct advantage. Book knowledge does not seem to give the child as clear an idea as do models or some other illustrative material.

Value of visual material in teaching nutrition

Quite recently I secured copies of the charts prepared by the American Medical Association, showing various food values which were very helpful in creating interest. In presenting nutrition lessons, visual material was necessary when working with groups of students who had no previous training in foods.

I should like to hear a discussion of what material has been prepared that can be used to assist in teaching the various phases of health in high school. I have talked with home economics groups, groups in biology and in agriculture, and I find that if you have some practical scheme to use you can take a little bit of material and in a few lessons give students of high school age a very clear idea of some of the outstanding needs in the selection of foods. Simply to tell students what to eat is likely to make very little impression. They are not interested in listening to what people have to say. If you can use attractive illustrative material and let them assist in making the plans, your lesson will be much more likely to be effective.

Chairman:

Miss Harris has raised a very interesting point and one which we need; that is, what are the materials available? She has stressed especially the materials that can be used as a part of visual education. Now may we hear from those of you who have had and are having experience in the use of various materials?

Miss Edna Keith, Elementary Supervisor Public Schools, Joliet, Illinois:

Our work in Joliet has been more with the little children than with high school students, and one trouble we have found in trying to help these children form correct habits of living has been that we have done the same thing in each grade. We have not been able to find the material that would suit the different grades.

This year, however, the Elizabeth McCormick Memorial Fund has been furnishing us some very excellent material for nutrition work and health lessons through the fourth grade.

Joliet, Illinois

One of the projects carried out was on sleep in which the children studied the ways people of different nations slept, and so on. That material I suppose will sometime be available.

We have not spoken this morning about the devices that may be used to get children interested in really doing things. For instance, there is the checking-up device for little children, to get them into the way of forming habits, and it has more effect than any amount of talking. Talking about eating breakfast foods and fruits does not have the effect that the actual reports that the children bring from home do.

We did try an experiment two years ago to find out whether the introduction of movies would get material across better than the same material given to the children without the movies. One very great trouble in the beginning was to find the movie that would fit the occasion, and I feel that for a long time that is going to be a very serious handicap. So many of the movies that we used had something else in with the picture, and the group of children who had exactly the same material and made their own little movies, in the end, I think, had just as much knowledge through the tests as those who had the movies. Anything that is going to increase the interest of the child and make him do the things that we want him to do will be a help.

Mrs. Lucy M. Paul, formerly Instructor in Physiology, Bacteriology and Hygiene, Pratt Institute, Brooklyn, New York:

I will just bring out this point: For the past two years I have been in Brazil. Those girls really knew more than a girl of the same age in the United States, from theory, but not from practice. In the short time I had with them, nine months, I think that I tried to bring home to them that the things they had already learned theoretically should be put into practice in their home lives.

Here in the United States I found that the things the boys and girls really had in the laboratory and the things that I showed them under the microscope they never forgot. They are interested in seeing life in the laboratory.

Chairman:

That has very definitely registered laboratory equipment as it is used in experimentation relating to personal health, as a part of the material to be considered.

Mr. C. E. Turner, Associate Professor, Department of Biology and Public Health, Massachusetts Institute of Technology, Cambridge, Massachusetts:

Motion pictures

One suggestion relates to a comment which was made on motion pictures. We have experimented with motion pictures in the junior high school, and our feeling is that the motion picture is a more expensive kind of education than other visual materials, and that its primary use is in the presentation of such material as cannot be demonstrated by still pictures or by library material. It is better to have the child do it, but if you can't have him do it you can have him see it done in the motion pictures. Take, for example, the growing of bacteria, or the process of bringing certified milk through a first-class dairy. If you can have the child grow the bacteria, that is first, but if you cannot, you can have him see the thing done with the motion picture, and in that particular form it has a unique value and I think perhaps nothing else can take its place.

My other point relates to the use of the health knowledge tests. We have just used, through the courtesy of the American Child Health Association, a health knowledge test for junior high school children.[1] I want to suggest it to you, not only in its possibility of giving you an idea of where the children stand so far as their knowledge is concerned but also as an excellent basis for problem work and project work.

Chairman:

Miss Whitcomb, we want very much to have the point of view of home economics upon this topic.

Miss Emeline S. Whitcomb, Specialist in Home Economics, United States Bureau of Education, Washington, D.C.:

I am very much interested in what everyone has said. I should like to talk about the school cafeteria. As I travel over

[1]Gates-Strang Health Knowledge Tests, Bureau of Publications, Teachers College, Columbia University, New York City.

the country in visiting schools, I aim to be present at the luncheon period, for I desire to learn at first hand whether the instruction in health and in food selection functions in the cafeteria. I so frequently find that after all that has been taught on the subject of good food habits and food selection, pupils pass the milk, vegetables and fruits on the cafeteria counter and grab for the chocolate marshmallow cakes, pickles and sweets. They seem to like weiners and hamburgers and other similar edibles.

The home economics angle

When I say to the persons in charge of the lunchroom, "I suppose that everything you teach in the classroom functions here," the reply invariably is "Oh, yes." But my own observations do not concur with this reply.

It would seem that after considerable time and money have been spent on teaching proper food habits and good selection of food, the school ought not to permit children to rush into the cafeteria eating an ice cream cone or some sweet. It would seem that there would be a definite plan by which students could march in orderly fashion into a cafeteria, where considerable psychology was used in the arrangement of food on the cafeteria counter.

In one of these visits to a high school, my attention was especially attracted to a boy about fourteen years of age, who weighed nearly two hundred pounds. He seemed enormous, as you might picture. I watched his tray. It was heaped with potatoes and gravy, a lovely pork chop, lots of bread and butter, cake and ice cream. I asked this youth whether he was going to select any vegetables or fruits. His reply was in the negative, saying, "I don't like vegetables" and thereupon sat down and enjoyed his meal.

In another high school, miles apart from the high school just cited, I found a good many girls overweight. Yet, invariably, they chose at luncheon time, cake covered with chocolate sauce. Milk was not chosen at all.

I have another school in mind where milk is found in every dish that is served, so that a child cannot get out of using milk. There is milk in the soup, milk in the main dish, milk in the dessert, and the dessert is very simple. This school has a dietitian and a very lovely lunch room, and it seems to me that it is attempting to put into practice the rules and regulations that are laid down in the classroom.

Almost everywhere, candy and cakes covered with frosting are sold. When I ask whether candy is sold the reply is, "Yes, we just have to sell it. We must make this lunchroom pay and if we don't have candy here, the children are going to buy it outside. Hence, we sell candy. But we don't place it first on the counter." In some cafeterias it is first, while in others, candy is not permitted unless children have chosen the proper sandwich, salad, milk and so forth. I know one school where the person in charge says it is not good reasoning to say that if we do not sell candy the children will get it outside. You might say that the teacher of English ought to use the dime novel, for the same reason. This cafeteria director has never permitted candy or those very lovely frosted cakes to be sold in the lunchroom. One day, by mistake, the grocer left some cakes and the cafeteria director thought she would try an experiment. She said, "Well, I will just try and see what happens," so the cakes were left there. Of course, children are children, and their will power is not quite as strong as an adult's, hence they chose them. When she looked at her receipts that day she found that she had not made one cent more. This seems to indicate that candy and cakes do not bring up the receipts.

School cafeteria and the principles of health education

I am pretty well convinced that we do not apply the principles of health education throughout the school cafeteria. In the first place, the cafeteria often is in a dark basement. In the new school buildings, the cafeterias on the whole are very attractive; but when we eat we like to be where it is sunshiny and pleasant. I wish that we could think of some ways and means in this Conference whereby our health education could function and could be put into practice in the school cafeteria.

Chairman:

I think that is a very real contribution. We are considering other kinds of materials than that offered by a chart or contained between the covers of a book. It is emphasizing a point that was made in the opening of this discussion, that materials can be found and are found in the environment of the child. I hope we may have a discussion on how, in a practical way, the cafeteria can be made a real contribution to health.

Miss Gertrude Henderson, Publication Secretary, American Social Hygiene Association, New York City:

My mind has been running on the great store of material for social education. The whole school time is full of it; from morning to night and from subject to subject the children are getting experience in living with each other. I question whether the schools are making as much actual use as they might be able to make of such opportunities.

Materials for social education

The art of living, it seems to me, is a very large part of health; and children need practice in it, with the aid and kindly criticism of teachers and of others more experienced in the art of social living. I am thinking of a little girl who moved from a country school to a New York City school. She went to school for nine months and knew nobody. She lived her school life by herself. Of course this is individual; but my point is that the organization of school life is in line with that sort of living, and that it is only the hearty, sturdy demand of children for human companionship, and contemporary companionship, that gets beyond the obstacles set up by the carefully preserved orderliness of many schools.

I am thinking of a public school in New York City where the children are marched into school at a definite hour and kept still as much as possible,—not very successfully, but the effort is to keep them still all through the school day. They are marched down into the basement for exercise, and then marched back into the classroom, and marched out again. It is probably the same in big cities everywhere; no use is made of the materials for social education.

All the girl friendships, all the boy groups, all the boy and girl friendships—these are some of the many materials for social living that the school life essentially offers. The teacher needs to meet and talk with the children whenever the opportunity comes, recognizing social intercourse as a part of the material of rounded education and quite indispensable to any really balanced health education.

Chairman:

We are very glad indeed for that contribution.

Miss Swalwell has made a real contribution in the field of

secondary school education, and we are very eager to hear from her.

Miss Belva L. Swalwell, Assistant Professor of Hygiene and Sanitation, Iowa State Teachers College, Cedar Falls, Iowa:

Iowa State Teachers College, Cedar Falls, Iowa

My work is to teach teachers how to teach health; teachers from kindergarten to high school, including supervisors and superintendents. Invariably the question comes from teachers, "What can we do to teach health?" Especially is this true of those who are interested in high school work. We must realize that most of these would-be instructors have had very little training for health teaching in their previous education. They have no background for this work as they have for history, geography, mathematics and other subjects.

The Iowa Physical Education Law requires that physical education, which must include effective health supervision and health instruction, be given to all pupils, of both sexes, in all grades. The law does not provide that all teachers be prepared to teach health, although it does demand that all schools having to do with the training of teachers shall provide courses in health instruction. This does not mean, however, that every teacher shall have received instruction in it. Consequently, many of our teachers are having to try to teach health without having had any preparation for doing so. For example, many of the teachers in charge of the Normal Training work in our high schools were obliged, when the health law went into effect, to handle health teaching without having had any training along this line.

For some of the students in my classes, the courses are required, but for others they are elective. Since for all of them the courses are very short, I must try to give them something which will carry over, something which will interest them so deeply that they will go ahead by themselves and keep on hunting for health material.

We endeavor to reach some of the teachers in service through extension work and to aid others with materials and suggestions if they ask for it. In collecting the materials which these teachers might make use of we take special pains to draw from sources which we feel reasonably sure are scientifically correct in regard to the factual material; we must do this because in most cases

the teachers do not know whether the materials they can get are all right or not. Almost anything in the way of materials which we suggest has to be given free, as so many of our schools made no provisions for paying for it, and the teachers cannot be expected to spend their money for supplies for the purpose of teaching health any more than for teaching anything else.

Bibliographies of health materials

A bibliography of free materials to aid in health teaching has been prepared by the Iowa State Teachers College and is sent to any teacher in the state upon request. The first on this list is what can be secured from city and state boards of health. Among the materials sent out are discussions of such subjects as flies, mosquitoes, drinking water, cancer and contagious diseases. The teachers all over the state can have their names placed on the mailing lists of these various boards and receive for their work, free of cost, the regular publications of the boards. Certainly every teacher should be interested in the health work undertaken by the state.

The bibliography indicates that the Iowa State Board of Health has a number of bulletins and leaflets containing such things as the rules and regulations of the state board of health, and information concerning the prevention of scarlet fever, whooping cough, diphtheria, smallpox, etc., all of which every teacher in the state should know. The bibliography indicates further, that there are courses of study in physiology and hygiene and sanitation for various states and large cities which are furnished free or for a small sum of money. And still further, this bibliography states that teachers can obtain gratis from the Department of the Interior and the United States Department of Agriculture numerous bulletins concerning many phases of health. Some such materials may also be obtained from the Iowa State College of Agriculture and Mechanical Arts. Teachers are told to ask the mayor of the town in which they teach for a copy of such city ordinances as aim to keep the people free from disease.

At the Iowa State Teachers College a bibliography of health books which includes the names of the authors, the dates of publication, and the addresses of the publishers, has been prepared for the use of teachers. This bibliography is arranged in three

sections; one of which indicates books which can be used for reference work and for use on the library table.

A bulletin on "Teaching Health in High School" was prepared and published by the State University of Iowa and sent to every high school in the state. It takes up the various subjects taught in high schools and suggests some contributions each can make for the teaching of health.

University of Iowa bulletins

The University of Iowa has also four other bulletins which are helpful for health teaching in the upper grades. They are concerned with outlines for courses in the social studies for the following grades:

Junior High	Seventh:	The European Setting of United States History.
	Eighth:	United States History.
	Ninth:	Problems of Citizenship.
Senior High	Tenth:	European History Background and Beginnings.
	Eleventh:	History of the United States Period of Discovery and Exploration.
	Twelfth:	Contemporary Problems: Social, Economic, Political.

All through these bulletins are suggestions for health teaching. At the end of the sections or chapters in each of these booklets are given references with pages indicated so that the teachers will know definitely where to get reading materials for each of the topics to be discussed.

If time permitted one might name other materials which would help teachers carry on health teaching, but enough has been given to indicate that teachers who are earnestly desirous of teaching health effectively need not lack assistance.

Both nation and state seem to be realizing more and more that if we expect our secondary school teachers to do much teaching for health, we must help them in every way we can, and make it as easy as possible for them to get a knowledge of what should be taught, where it should be taught, and how it should be taught.

Chairman:

It is perfectly evident that Miss Swalwell is doing a tremendous work in helping this filtering process that has been mentioned before.

Recently I had a conference with a health counselor from one of the high schools not very far from Chicago, and she was very much concerned in her effort to get health taught indirectly by the various teachers of the high school, although it could not and never would be their major problem. Of course, the first reason they gave for not entirely cooperating was that they did not see the way to do it. This is, of course, a very practical problem.

Miss Freeborn, we should like very much to hear from you in regard to what has been done at Rochester.

Miss Helen D. Freeborn, Supervising Teacher of Health Education, Public Schools, Rochester, New York:

I agree with the last speaker that the teacher herself needs a great deal of help in choosing material. The teacher has not very much background for teaching health because she has not had training in health education.

In Rochester my work is that of supervising teacher in health education work in eleven elementary schools. I also serve as an advisory member on the junior high school committees which plan health campaign work. In the junior high school we have felt that we needed, in addition to our work in home economics, science and physical education, to stress health habit formation. In the Washington Junior High School we have just finished our sixth annual health campaign. The health campaigns are held at the close of the year during the spring term, and in this last campaign we stressed almost entirely the correlation of health with other subjects.

Health campaigns Washington Junior High School, Rochester, New York

Perhaps if I were to mention a few of the topics with some of the references that we used, you might see how we got the children to use material that was not directly health education material. For instance, we had committees from the Social Studies Department who planned programs which correlated health education with the social studies. Then these programs were

used in the weekly class meetings during the health campaign period. Under the study of city departments in the Bureau of Health, a study was made of disease prevention clinics, welfare stations, clean streets, etc. We gave as references that the children might use in looking up their assignments for class meeting, chapters from various books as well as the Health Bureau bulletins put out by our own city.

In correlation with English in the same campaign the children studied under the topic "Leaders of Men," the lives of such men as Washington, Lincoln, Roosevelt, Gladstone, Socrates, Moses and so on, and found a direct influence of health in the lives of those men in helping to make them great. They prepared the material themselves, it was not prepared by the teachers. In connection with English we also had the children study the lives of great scientists.

I am particularly interested in what materials we can use in actually helping teachers so that they can teach health. I find as I go about among the grade teachers in the elementary schools, that even in spite of the fact that there are at least ten different health books in the reference library of each school that they may consult in hygiene work, they do not seem to realize the value of using their references. In my work this year the way in which I felt I could help teachers most was through helping to make them familiar with reference material, and I should like very much to know how other people do it.

Reference Material

I am also interested to know, in connection with the teaching of teachers, just what materials are used in summer courses. I teach a course in the University of Rochester, in Health Education methods, and I am planning this summer to use as textbooks the Report of the Joint Committee,[2] and Health for School Children.[3] I am also planning to have each of my teachers review some book relating to the health of children and perhaps if it seems feasible, have one book review read in class every day. Then we are going to study, if possible, either "The Normal Mind" by Burnham,[4] or "Wholesome Childhood" by Groves,[5]

[2]Health Education—National Education Association, Washington, D.C.

[3]School Health Studies No. 1, Bureau of Education, Department of the Interior.

[4]Appleton Co.

[5]Houghton Mifflin Co.

and will use the reports of the Mohonk Conference, the San Francisco Conference, and the Cambridge Conference,[6] as reference materials. I hope that there will be something said about what materials are used in teacher training.

Topic 4: WHAT MATERIALS ARE USEFUL IN THE TRAINING OF TEACHERS?

Chairman:

WE have now the topic: What materials are useful in the training of teachers? I am very glad that Professor Turner has consented to open this discussion, because we know that he is in a strategic position to have opinions on this very important question of materials, and we want to have from him what materials he has found useful and what materials he feels are on the teacher training level.

Professor Turner:

I will try to indicate briefly some suggestions regarding the materials for teacher training. It may be repeating in general the discussion at another session, if I remind us that the program for the teacher-in-training involves ideally four main factors. First, the teacher should enter a program of healthful living prescribed for her by the conditions of the institution in which she is working. Second, she should have instruction in the field of personal health and those phases of group or community health which are directly related to it. In the third place, she should have basic subject-matter from sciences, including biology, bacteriology, psychology, physiology, etc., to supplement her knowledge of health. These courses must be so organized under the direction of a faculty committee that each course will contribute as much as possible toward the health knowledge and development of the individual student. Finally, the student needs specific instruction in the methods of health teaching.

Four factors in teacher training program

There are certainly those four factors in a program for teacher training for which we need to consider materials. In addition there are two important tasks before us in selecting material for the use of the teacher in service. First, we need

[6] American Child Health Association, New York City.

material to give the teacher a perspective, in order that she may work well under the direction which she is having, and second, material to supply the fundamental background which she lacks, particularly the background of the physiological science underlying the habits of healthful living.

Every course should provide for the student, library reference and source of material to which she may refer.

It is not possible here to go into the discussion of detailed texts in the various fields. I wish to suggest to you as a reference, "The Report on the Present Status of Health Education, Physical Education and Medical Inspection," which appeared in the American Journal of Public Health, and is available in reprint form from the American Child Health Association. This report gives reading lists with appropriate divisions and a brief statement of the nature of courses of study which have been printed in the United States. In training our teacher we should familiarize her with the present demands of the different states, even though some of those demands ought to be changed and improved, and with the kind of material which has already been produced.

You are all familiar with the Report on Health Education of the Joint Committee of the National Education Association and the American Medical Association which, in its reading list, furnishes an excellent point of departure. There are similar reading lists issued by the American Public Health Association and by other groups.

Textbooks for teachers on personal health

The first factor which I mentioned was the course in personal health and for that, as you know, there are many texts, including the books by Williams[7] and by Fisher and Fisk,[8] both of which have been very widely used. Miss Broadhurst's book[9] and a variety of others are also pitched at the teacher training level.

May I take the liberty to call to your attention two books in this general field which have come from the press within the last two weeks, one is a book by Miss Williamson and Professor Winslow on "The Laws of Health and How to Teach Them,"[10]

[7] Personal Hygiene Applied, W. B. Saunders Co.

[8] How to Live, Funk and Wagnalls Co.

[9] Home and Community Hygiene, J. B. Lippincott Co.

[10] Charles E. Merrill Co.

which is a combination of basic facts underlying the rules of healthful living and suggestions for teaching method. The other is a course of study on personal and community health which has been developed from some years' experience in teaching freshmen, both in men's and women's colleges, and which attempts to present the basis for the subject-matter course in normal schools and teachers colleges.[11]

"Healthful living" material

The second topic, healthful living, is largely an administrative problem, and best attacked, perhaps, through the reports of various committees and conferences. These include the reports of the American Child Health Association conferences at Lake Mohonk, San Francisco, and Cambridge, also the report on Health for School Children,[12] prepared by the National Child Health Council, in preparation for the Mansfield Demonstration. There are some statements of similar character prepared by state departments of education or health. The State Department of Education of Connecticut has prepared for its school people a statement on the organization and methods in health education entitled "The School Health Program."

It is too long a task to try to suggest texts in basic sciences for the third group of subjects.

Turning to the topic of the methods of teaching in health education, the best material is the demonstration center of the practice school. We cannot regard any course in methods of teaching health education as complete and satisfactory, which does not have an opportunity for demonstration and practice in conducting health work with children of the different age groups. Such a demonstration ought to exist in every teacher training center. It is fairly easy to organize in almost any community, on an experimental basis and in a single school.

In the second place, there should be an accumulation of all of the available material. I suggest, if you are not already doing so, the preparation of a scrap book or source book in which you have accumulated the various pamphlets, booklets and pieces of literature from all the national organizations and the government departments, arranged by the source of material so that

[11] Personal and Community Health, C. E. Turner, C. V. Mosby Co.

[12] School Health Studies No. 1, Bureau of Education, Department of the Interior.

your teacher knows the kind of material put out by different organizations.

In the third place, the teacher should be provided with a knowledge of the nature of the various organizations which touch the field of health education, both official and unofficial, so that she knows how these groups are organized and the kind of thing they attempt to do. Only with such knowledge does the teacher feel at ease in the field and feel that she has at her back a group of supporting agencies from which she can get the kind of material and help that she needs.

Let us also provide for the teacher the fundamental information in the nature of the growth of children, both physical and mental. We have rather more material on the development of the mind of the child, perhaps, than we have on the question of physical growth as it is related to the habits of living. Of course Dr. Baldwin's studies from the University of Iowa are of fundamental value in this field.

We have accumulated some data as to the effect of health education on the growth of children which is dangerous, because it is not properly collected and does not really signify what, to the layman, it appears to signify. One of the important tasks before us is to train our teachers so that (even though they may not have the ability to conduct large experiments) they will have the discretion to know when data are comparable and when they are not. Therefore studies which relate to the growth of children and the methods of experimentation should be considered in courses of instruction dealing with health education methods.

Measuring the results

Furthermore, we need to provide for the teacher from the research laboratories and from accredited pieces of research as much definite information as possible to give her a knowledge of the methods of measuring the results. Then if she undertakes to measure her results she will not measure falsely and her data will check with the results in other communities.

We ought to give the teacher pretty definite knowledge of the nature of the child health work in the community as it is done by the health department, the school department and by unofficial agencies. There are different regulations in many states. The teacher certainly ought to know what responsibility

inevitably rests with the health department, and what responsibility with the department of education. I suggest as material in this field the report of the survey of eighty-six cities,[13] which has just been completed by the American Child Health Association, describing all the child health activities, no matter by what organization they are conducted.

The teacher in training ought also to be given information to enable her to judge the value, adaptability and limitations of different textbooks. To that end she should at least have an opportunity to view as many of them as are in good repute.

Chairman:

We are greatly indebted to Professor Turner and he has raised points that some of us, I am sure, want to discuss more fully. For instance, I have particularly in mind the point made about regarding the accepted textbook as material for the teacher; of course that immediately raises the point as to what standards we may use in arriving at the place where we know we have the accepted textbooks. I hope Professor Turner will be here later, so that we may discuss it a little bit more fully, because that needs discussion.

We should like to hear from a person situated as Dr. Lanza in relation to judgment regarding materials, knowledge, scientific information important to the training of teachers for this field of health. Dr. Lanza is Executive Officer of the National Health Council and the constituent membership of this Council represents a wide range of public health organizations.

Dr. A. J. Lanza, Executive Officer, National Health Council: **National Health Council**

I find myself getting up to speak to this audience in rather considerable trepidation. I am skating on thin ice, and if I start any heresies, I hope you will bear with me kindly.

The National Health Council, as you probably know, is a sort of organization or loose federation that takes into its fold national health associations and some other national associations that are not exactly active in the propaganda field. Included in the Council are the American Child Health Associa-

[13] A Health Survey of 86 Cities—American Child Health Association.

tion, the National Tuberculosis Association, the American Social Hygiene Association, the National Committee for Mental Hygiene, the National Committee for the Prevention of Blindness, the American Red Cross, the American Public Health Association, and the National Organization for Public Health Nursing, all active members. The American Heart Association is a recent comer, with the governmental bureaus, the Public Health Service, and the Children's Bureau as supervisory members, and one or two smaller organizations as associate members.

National Health Council members interested in health education

Now we are trying to coordinate our work, and that is a very indefinite phrase but to make it more specific to the points at issue before this audience, let us consider for a moment that the American Child Health Association has a very active health education interest, the National Tuberculosis Association has a very active health education interest, then we have the American Social Hygiene Association, which has very well developed ideas as to what constitutes health education for their particular specialty, and of the necessity of it, and then more recently just beginning to get over the fence are the mental hygiene crowd who have extremely strong ideas on the subject of health education, its importance, its possibilities and methods of carrying it out. These health people feel that the future of their work lies in the schools, and so does the National Committee for the Prevention of Blindness.

Now it is obvious, I think, that in dealing with all these phases of health education, we have got to clarify our thought, get down to bedrock as much as possible, and realize that, after all, the lines of demarcation between the one and the other are more apparent than real. Just as the activities of the physical education group, the activities of the recreational and supervised play group and the activities of the health education group overlap, so that it is sometimes difficult to state where one begins and the other ends, so is it true of the more highly specialized divisions of health education work itself.

Now, if in a conference like this, we thrash out problems dealing with methods and material, you can see how much ground work there is to thrash out as between organizations like those I have just mentioned, that all have more or less highly developed health education projects of their own, and all feeling

with a considerable amount of justice, that these are very important and far-reaching interests.

In the organizations that make up the National Health Council we have fortunately both educators and public health specialists. So we have there, as it were, a battle ground upon which a good many of these problems can be thoroughly discussed, and it is our ambition and our hope to be able through membership in the Council, to adjust these relative interests, to distribute them properly, to give them proper emphasis and to see that the whole is presented as a well-rounded program.

In the Council we are trying to look at this question from the point of view of the consumer, and the consumer in this case is the teacher. It is to the teacher, the educator, that the message must go, and just in proportion as we on our side make that message to the teacher diverse, disconnected, too specialized and unrelated, just so will we make it difficult for the consumer to take our product and utilize it to advantage.

The advantage of the situation lies in the fact that all of us realize this and we are all working on that basis. We all know that we have to harmonize discrepancies and differences in the material as well as in the methods. Now, of course, when it comes to methods, we are not qualified to talk. That is exclusively the field of the educator. When it comes to material, we think we are qualified to talk, but we realize that very often what we promulgate with a great deal of self-satisfaction today is perhaps not emphasized so much a short time from now. Essentially, the facts of health and well-being, as we desire to pass them on in health education in the schools, are founded upon the sciences of anatomy and physiology, to which we must hold tight if we are not to get lost in the impenetrable forest. Nevertheless we know that in the application of public health principles we change our ideas. We think differently, for instance, upon some of the questions of ventilation than we did a few years ago. We think differently perhaps on the questions of some of the communicable diseases than we did a few years ago. We must recognize then, that these change, and we have to keep ourselves orientated.

Material's value not necessarily lasting

We hope that the educators on their side will keep in touch with those authoritative sources of information which guarantee,

so to speak, the soundness of the material, so that not only the material itself will be well grounded, but that the changes that occur in our viewpoints in the application of material can be handled in the application in the schools.

Finally, there is just one thing more that I would like to say on this question of materials, and that is that I think the whole business is not as complex as it looks, not as complex as sometimes we inadvertently make it, and that in this particular field of health education it is eminently necessary for us to keep in mind the necessity of working toward simplicity, and of keeping at least one foot on the ground all the time.

Chairman:

Mr. Routzahn, of the Russell Sage Foundation, who is here today, has given a great deal of thought to this subject of material for teachers and we are therefore very glad at this time to call on Mr. Routzahn.

Mr. Evart G. Routzahn, Associate Director, Department of Surveys and Exhibits, Russell Sage Foundation:

Inexact information on references

I have been thinking of this problem largely from the standpoint of use of material by the teacher in the classroom, but Professor Turner's suggestions provide an introduction for the few paragraphs I should like to leave with you.

After the teacher has read all of the material Professor Turner has suggested to us, she is brought up against some hundreds and hundreds of references to pamphlets, leaflets and countless other things which she is supposed to know about, and, I believe, to use. Because of that, certain questions have been raised in my own mind, and I want to put several of them to you in these few minutes; but first may I describe a little experiment conducted about a year ago?

A very excellent course of study was prepared for use in the public schools of one of the largest cities of this country. So far as I know, it was admirably fitted to help the teacher except when it came to the sources of information and the references to materials.

There is one classification in that book headed, "National Organizations—General References," with this statement,

"These organizations will furnish much information in all phases of the health field. This information is in bulletins, folders, pamphlets, posters, plays, rhymes, songs, etc." I had the co-operation of a young woman, a school teacher who was teaching several other subjects in addition to health, and who also had many sources of information. She was asked to write to those sources not knowing just what each on these long lists of national organizations furnished. These lists happened, by the way, to include flour milling companies, meat packing concerns, and two organizations that went out of existence after the Armistice. This is the letter that she was given to write. It sounded very much like letters I myself get from time to time, because the Russell Sage Foundation is on similar lists:

> The course of study in health education of the..... public schools states that you will furnish information in all phases of the health field. Will you please send me such material?

Material secured through the mails

This letter was sent to forty-nine addresses. Of these eight did not reply. One replied as having no health information. Three letters were returned because no street addresses were given, and two were returned because the wrong city was given in the list. Five of the total number wrote back asking for further information. Those who answered sent 229 pieces of printed matter, weighing nearly fifteen pounds. There were in the collection nineteen lists of publications, one containing more than five hundred titles—several of them naming as many as one hundred titles for the teacher to look over and pick from. One sent five long form letters; another, a document of 330 pages, the annual report of the Surgeon General of the United States Public Health Service. One health department sent regulations governing sausage factories. The Smithsonian Institution sent a list of publications ranging from aeronautics to zoology and referred the inquiry to the United States Public Health Service. From one source came pamphlets on "Good Water for Farm Homes," and "What the Farmer can do to Prevent Malaria"—these being sent to a teacher in our largest city! From another source were received several pamphlets on house cleaning, and removal of stains from textiles.

May I give you another illustration? A book on health train-

Inadequate information in lists

ing which probably is used more widely in the schools than any other, in its first edition listed "Physical Culture" as a magazine for those teaching health. Needless to say it was removed in the second edition. There are other things just about as absurd in the list of periodical references. Some of the periodicals were the kind that possibly the normal teacher might use, if she could draw out of them some gems here and there, that she could pass on to the teachers-in-training, but for the teacher in the classroom itself they were utterly hopeless. There are also references to a number of city and state courses of study. Some of those states could not supply all of their own individual teachers. Could you imagine how they could supply to teachers in any other state? Yet they were listed there. Free publications were not so mentioned, so the teacher had no basis for knowing that she might risk two cents apiece on asking for those particular publications. In that same book of sources there were titles listed under many topics with absolutely no indication as to the nature or quality of the treatment of the subject. There was no way for the teacher who wanted to buy a single book to know how to pick out the book that might be bought for the sum she could spend.

So here are the questions I should like to ask: (1) Would it not be better in the first place that teachers-in-training and teachers-in-service should have submitted to them selected, limited lists with suggestions as to first choice or second choice? It may be your choice might not be my choice, but would it not be better to have yours or mine, rather than no choice at all? (2) Should not addresses and all information as to sources be not only complete but also accurate? That is going to add new tasks, for the general practice is not to check and confirm the references to sources. I don't know whether any of us here prepare lists or get up books, but I plead with you to beware of what other folks have done, or left undone. (3) Should there not be indication of free material in all cases, because there are so many teachers who have very little money to spend for material. If there are some things which they can secure free, why not make that clear, and in the case of others state the price?

Finally, should we not be cautious about the use of undesirable material or even material of uncertain value? I hope we

will develop in this session and in the session that follows, something as to the evaluation of this material. But at least may we not refuse to list items when we have doubts as to their usefulness?

Do we not owe a real duty to the health movement in the schools in suggesting and advising regarding materials?

Chairman:

I think all this indicates what much of our discussion has indicated, that we certainly have reached the point where we must select, but I think we none of us feel at all smug about our ability to select hastily; individual opinion may have its particular bias. We want to safeguard our selection, from the standpoint of being sure that it is what we need, that what we select is valuable, and that what we exclude is not what we want. We might do a great deal of harm by forgetting to bear these points in mind.

Therefore we must think of the service, experts in the various fields may contribute to this matter of selection, and then test that by actual use of the material in the field.

Miss Thomas has, in her experience, I am sure, evolved reasons for thinking certain things about materials in teacher training. We should like to hear from her.

Miss Adelbert A. Thomas, Director Health Education, Kentucky State Board of Health:

Kentucky State Board of Health

I should like to say that the types of material I have listed here on this card as being requested by teachers in the field, were all prior to the time when we had a course of study in health education. That course went into effect this July and prescribes what is to be taught, so I believe that from now on we will have a different type of request, because the teacher will know what she wants more definitely, and she will want more information because more is being asked of her in the classroom at the present time.

In the first place we have many requests for information concerning problems of sanitation, about water supply and about toilets. We have, of course, a distinctly rural problem.

Kentucky is largely an agricultural and rural state so we have many problems in sanitation to solve. We have material to send them along this line.

Material requested

We have requests for supplementary reading material. I try to keep everything in quantity, so that I can send these teachers a sample of what they may get from the different organizations if they write for additional material.

We have requests for games to play without equipment, games to play on the country playground. So many schools, you know, were built on the steepest hill in the community with no flat space to play on, and these teachers want games to play on the center of the playground space without equipment.

We have requests for posters and pictures, innumerable requests for pictures, which we cannot always answer. We have requests for information about communicable diseases, for films and exhibit material, and for special topics such as heat and ventilation, for books suitable for libraries, for height and weight lists and charts; for bibliographies and lists of materials; and for names and addresses of where to get material. We have requests for information about the proper food for children. We have also requests from teachers asking for material to send to the mothers in their parent-teacher groups, that the mothers may know about this health program, and especially about proper foods for children. I have prepared therefore some material that I can give to these teachers for their parent-teacher meetings.

Of course, there are other odd requests that come in but in general they are along these lines and we have hundreds of them. I send out thousands of pieces of literature to country school teachers and teachers in small towns and villages. From now on, as I said in the beginning, with the course of study prescribing what they are to teach, I think we shall have requests for material of a more definite nature.

Chairman:

I think that is a very valuable contribution, because it is actually news from the field. It tells of the kind of thing teachers feel the need of, or in what section of the work they feel the need of material, and it is from that kind of information that we could

perhaps begin to work to fill in the gaps and build up a better body of material for the teachers. At the same time, of course, as Miss Thomas says, the requests of the teachers themselves will shift according to the direction they have secured through certain types of education.

Dr. Wood, have you anything you would like to emphasize at this point of our discussion, before we go on?

Dr. Thomas D. Wood, Professor of Physical Education and Advisor in Health Education, Teachers College, Columbia University:

Miss Thomas has given us very valuable information from the field, and there are suggestions and study which I think we ought to have in relation to this topic.

However, I want to say seriously, I think Mr. Routzahn assumes a little too much with reference to the ability of any individual or organization to prescribe the specific bulletins or materials which shall be sent to Miss Jones in the field. We must allow, I should say, some range of opportunity for selection, even with comparatively untrained workers in service.

I am sure that we ought to improve in the definiteness of our recommendations and responses to requests for materials. The practical question is, how shall the teachers be guided, how shall they be advised with reference to the reliability of sources of material?

How shall teacher be guided in choosing material?

May I say again, that I think that every teacher, every adult ought to have, so far as education can give it, a scientific attitude of mind. We need that very much. It is of the greatest importance for practical living and efficiency that every adult should know the range of his ability to form his judgments for himself, regarding the reliability of information and sources of material. If he be fortunate enough and wise enough to know that boundary, then he should know in the next place beyond that boundary where he can find expert advice.

With reference to the safety and reliability of sources of materials, I say to my own students that they must consider as essentially reliable the books, the texts, the courses of study that are adopted by the educational authorities. We must depend on the materials, pamphlets and information which come

from our official health authorities, state boards of health, federal boards of health, and our federal and state departments of education.

I think we must help the teachers to beware of all commercial sources of health information and health knowledge. The commercial organizations must be considered as biased in judgment and therefore less reliable than the other sources that I have mentioned. The outstanding exception to that general rule will be, I believe, the life insurance companies, in that the life insurance company of today has discovered that a very important part of its work is that it shall be a great life saving and health promoting agency. The essential life interests, the health interests of the community and of the individual seem to lie parallel with the business of the life insurance company. That is a very significant fact.

Unreliable or doubtful sources

Our teachers in numberless instances are using materials that are taken from unreliable or very doubtful sources.

In relation to this question of materials in the training of teachers for health education, we need very much, criteria, tests, measuring instruments for determining relative values. May I refer again to studies that have been undertaken in Columbia University through the Department of Elementary Curriculum Research for the organization of professional criteria for evaluating with quantitative values. We already have on file many evaluations of courses of study in health education. Now, it is important that such criteria should be set up parallel with, and consistent with criteria for other subjects taught in the schools. It is correspondingly important that we should have concrete, definite criteria for evaluating books and charts and other materials.

We need very much studies in this field; we need to find out what are the results of the use of one type of material as compared with another. Miss Zirbes has told us of certain characteristics in books that detracted from their efficiency as they were used by children. Now we need correspondingly to discover the relative value of charts prepared and set up before the children, compared with charts which they make themselves.

It will be exceedingly difficult to find this out. We need a great many studies with reference to the value of material. The

specific suggestion that I have in mind is the gathering in from the field, of the impressions of a fairly large number of teachers in rural schools, in small town schools, in various types of schools, giving their reactions regarding the materials more valuable in type and the materials less valuable in type, which they have had an opportunity to try out in their own practical fields.

Chairman:

Miss Ada M. Field is here, and we are very eager at this time to have her point of view.

Miss Ada M. Field, Associate Professor of Food Chemistry, George Peabody College, Nashville, Tennessee:

George Peabody College, Nashville, Tennessee

Materials for nutrition are my hobby, and I am going to tell you about those I use in a course of two credits or twenty-two actual hours. So far as I have been able to find out, there is no altogether satisfactory text for such a course—a course for the prospective grade teacher. The only requisite for entering this course is that the students shall not have knowledge of nutrition to any extent. They may or may not have had scientific preparation.

The text I am using, "Feeding the Family," [14] by Mary Swartz Rose, has to be supplemented quite a bit in regard to food composition and in regard to digestion. I have found no good source for supplementing it in regard to food composition. I meet that in lectures. In regard to digestion, it is rather easy to supplement by any good, simple physiology text. I usually try to get the students to use whatever physiology they have studied to refresh their minds with regard to the points of digestion.

With "Feeding the Family" as a text, I also warn my students against an overemphasis on the energy value of food. Those of us who were students of Mrs. Rose do not like to criticize anything she has done, and yet I do feel this book as a text has these defects. There are probably fewer secondhand copies of that book posted on the bulletin board for sale, than almost any other textbook used. I think the students take it home and use it.

[14] Macmillan Co.

I want to endorse what has been said before, that I believe we must judge among the wealth of things that are valuable. I do try to have most of the things that might be helpful where the student teacher may see them, but the students say that without selective arrangement they do not know where to begin. I believe it is better to make a selection or at least put on one table the things we think are the most valuable, and then put on another table the things that might be helpful if they have time to look at all of them.

Selecting and classifying material for teachers

With the texts in physiology and hygiene, I try to select those that give the most helpful discussions of the subject-matter of nutrition, including especially books that may be put into the hands of children. Of course, we know the really suitable books are very few as yet. I feel that Florence Winchell's little book, "Food Facts for Every Day" [15] for the fourth, fifth and sixth grades fills the bill very successfully. I have seen it used in the fifth grade. I asked an educational administrator of wide experience to read it and tell me the lowest grade in which he thought it could be used. He said if the chapter on calories were left out the other matter could be assimilated by a fourth grade child. Now there are other books more or less valuable, but following my notion of selecting books I am just going to name these two.

Of course, the publications of the American Child Health Association, the health education bulletins of the United States Bureau of Education, the bulletins from the Children's Bureau and others, all give subject-matter that is helpful along the different lines, and I try to classify them for the teachers as (1) those that belong especially to and can be used with the parent-teacher associations, (2) those that relate to the pre-school child, etc., so that they can find most easily those in which they are interested. Students are always interested in posters and pictures.

Theoretically I agree with Dr. Wood in regard to commercial publications. Practically, I should be sorry to rule out the posters that are put out by the National Dairy Council. I do try to get the teachers to judge all their material, because even perfectly reliable agencies—I have in mind one life insurance

[15] J. B. Lippincott Co.

company—allow material to get out of date, so that I think we are going to have to train our teachers to criticize everything which comes under their observation, and to be always on the watch to criticize commercial publications. If we can teach our teachers judgment I see no reason why we shouldn't use a good piece of really scientific material even if it comes from a commercial group. There is always a possibility of bias, and of course, we know all of us have seen things that were utterly unethical, that we could not condemn too strongly, so that we certainly need to have the teacher on her guard not to be made a catspaw of a commercial agency.

Chairman:

Here again it seems is extremely valuable information, the actual experience of someone who has tried out different things, especially someone who is in the work of training teachers. I was glad Miss Field in referring to specific books referred to the fact that she tried them out and found them useful. She hasn't given a recommendation in regard to one or two things that theoretically may be good, she has tried out these particular things. She has given us concrete illustrations of the types of material that she has found filled a certain need.

Mrs. Avery has been working in the home economics field, especially in extension work with teachers.

Mrs. Ora Hart Avery, State Supervisor of Home Economics, State Board of Education, Richmond, Virginia:

State Board of Education, Richmond, Virginia

If William Jennings Bryan had followed the course of home economics very carefully, he would have been absolutely convinced of the theory of evolution. We have gone through every phase, we have taken every line of thought, we have reached out and grasped this and that and the other thing, the best of everything that we could get hold of and brought it into our course, and we have brought in, of course, health as the most important thing.

What is the home economics course, practically? The foundation of all the work that we would like to give in home making is a course on health.

Before we decide what materials are to be used, we want to

decide also what our teacher is supposed to be, to do, and to know, when she gets out in the field. Of course, our home economics teacher must know health standards, she must know child psychology, she must know the economic conditions of her community, she must know how to recognize materials when she sees them, and she must know how to use material after she gets it. She must be able to introduce, to perfect and to maintain the healthy living in the school, according to whether there hasn't been any healthy living, or whether it is just in a progressive state, or whether it has been completed by a good teacher and it is for her to carry on. She must be wholesome, happy, healthy and modern.

Textbooks for home economics teachers

In order to attain these things she must be informed. We use the text to give our teachers information. The texts that we use in the schools particularly in our teacher training centers, are McCollum, "Newer Knowledge of Nutrition";[16] O'Shea, "The Child, His Nature and His Needs";[17] Sherman, "The Chemistry of Food and Nutrition";[16] Rapeer, "Educational Hygiene";[18] health education reports, and, of course, the state adopted text. We have the habit of adopting textbooks for a period of four years. The teacher can use other materials with those texts; we put them in touch with the state board of health and with other sources of material.

In training the teacher she ought to be taught how to organize her work in school, and how to make surveys, because if she is going to make any success of teaching at all, she has got to know her community. She must base all subjects on the needs of her community. She must be able to survey the needs of the community and fit her information to those needs. She needs to know that she must have material on plays and pageants, that she must have material on school games. With all my home economics teachers I do not believe there is a September that they do not have a basketball team. All my children are in the country and they have no physical workers so this work is shoved off on somebody, and the home economics teacher is the person on whom it is shoved. She does the chaperoning when

[16] Macmillan Co.

[17] Children's Foundation.

[18] Charles Scribner's Sons.

they go to play with other schools and she has all that athletic work on her shoulders.

My home economics teachers must also have some material on home entertainment, because we are organized on the cottage plan, and we entertain just as the mothers and fathers do. Of course, we feel that the greatest value of the cottage is in giving the boys and girls simple, happy, wholesome recreation. We want material which will enable them to entertain the boys and the girls in the cottages and make them happy, an attempt to get back to home living.

A great many of my teachers are not four-year teachers. We have to take frequently on a special certificate, teachers who have had two years preparation for teaching home economics. That means they are handicapped in many ways, and to get them up to the mark of other teachers I have to inquire when I go to the school, just what they are doing, can do and will do.

Finally, there is nothing on earth that is quite as good material for health education as a person who can be used as a model and as an example for teachers and for children. Of course, there are also the intangible materials, brains and ability and influence, and the greatest of these is influence.

Chairman:

Mrs. Avery has taken, as you see, the individual teachers as the real material in the development of her talk.

I am very glad that we have another worker who can report from actual experience in this interesting field. Miss Rood of the Mansfield Demonstration is going to give her experience in working with the rural teachers.

Miss Elma Rood, Director of Health Education, Child Health Demonstration, Mansfield, Ohio:

Existing materials for rural teachers

I am going to confine myself to the existing materials for work in teacher training in the rural fields. My material is limited, we have only a very small amount of money that can be spent every year, so that we have to make the best out of the material that we have. We pick up along the roadside bits of rubber, sticks, stones and other crude material, and make use of

them, since it is exactly the kind of thing that these country teachers have to make use of in the work in the rural schools.

The first two years of the Demonstration the health work was carried on by the health education director. The past year the work was turned over to the normal school director in order that advantage might be taken of a great many correlations which a special teacher from the outside could not make. This report that I am making on materials used, is based upon work planned and carried out by Miss Abigail Bristow, director of the course. I have gone over her report of work done this year and summarized the material brought into that course.

Materials used in training course in Mansfield, Ohio

One of the things that has been used very effectively in stimulating interest and in enabling the students to measure their own progress during the year has been a muscle tester. The chest expansion was also measured. A watch was used for demonstrating the ear test, a test which all of our students learned in the normal school class. Even though our district is not yet ready to allow these students to use it in our rural schools, they learn how to use it and in time may be able to put it into practice.

We also have a curio box of teeth containing everything interesting that we can assemble from a dog's head to all kinds of children's teeth. In one of the teeth the dentist put a brass wire through the bottom to show the children how the lime gets into their teeth. This collection has proved to be very valuable material for classroom demonstration work.

In the normal school we have used "Health by Stunts" [19] by Pearl and Brown. The students practice the stunts themselves in order that they may teach them later to their practice groups. The class has two practice groups, one in a rural school and one, a fourth grade class, in one of the city buildings. Here they have the opportunity to use any of these materials in their plans for practical work.

The students made an individual health code, and kept it for one entire semester as a means of checking on their health habits. This was also used as a basis for individual conference work, for discussions in class, and for checking on class progress in establishing correct health habits.

[19] Macmillan Co.

The city pasteurization plant served as material. The class visited the plant and from that visit organized a type lesson which could be used in the practice school.

A visit was made to the Mansfield Library to teach the students the use of the file, but incidentally to locate the health shelf and make them familiar with the materials there that they could draw on.

Some of the students in the normal school class were themselves used as material in dramatizing various school incidents. For instance, the students were given a concrete problem, "What happens when a child is sent home from a rural school because the teacher suspects contagion?" It is necessary in this dramatization to have the father, the mother, the health officer, and probably another child in the home. This was very nicely worked out so that they could clearly see that the dismissal of the child was only one little link in a long chain set in motion.

Concrete problems dramatized

The original work of the students in the normal school was frequently used as material for a demonstration in a classroom; for instance, a little play illustrating the health rules originated by the normal school students was acted by children. Demonstration lessons by the students or by the normal school director were given on the proper care of the teeth, washing of hands, blowing the nose, wearing proper shoes, applying simple bandaging, etc.

I hope you consider children as valuable material. In the normal school classes grade children were used as exhibits to develop in the students' minds a visual picture of the normal child. These children were asked to do a variety of things, in order that certain characteristics might be observed. Weighing and measuring also were done, eyes and ears tested, the morning inspection was held every morning in the practice school, poster work and slogans composed in the normal school class were used for class work. The children also dramatized supplementary reading lessons. Letter writing was encouraged for language, telling about the experiences of the children. The parents of children in the practice class were visited by the normal students in order to get some kinds of defects corrected. The children, however, did most of their own follow-up.

This points out some of the material that is available for

any normal school class. With this we must make our normal school students familiar before they go out, that they may not feel stranded when they get to a little rural school where there is very little to work with.

Another thing which we found to be very useful as material was children's classroom work in various subjects. This work was shown, questions would be asked, and suggestions made as to how this lesson could be made better. The work of children always aroused a great deal of interest on the part of students. Visits were made by the students to district teachers meetings which gave them their first insight into the way a group of teachers might work and plan together in a rural community.

The students also saw rural school demonstrations conducted by former normal school students. For instance, a model morning inspection was given, a review on a health topic or a silent reading lesson correlated with health. Such demonstration would be considered as very valuable material. As these outside visits were later discussed in the class, it could be seen how they contributed toward the broadening of the student's viewpoint on the work in the rural field. Again we might consider the rural health commissioner, and the public health nurse who came in for the discussion of problems related to rural schools, as material.

A visual check-up based upon the health examination reports, was very valuable material in surveying the outstanding defects of the normal school class, and was of great assistance in determining what points should have larger emphasis in the program in health for the year.

Blue Ribbon normal students

We used the blue ribbon in the normal school as recognition of achievement. Last year we had eleven students out of twenty who succeeded in correcting all defects, and in every other way meeting the requirements of the normally healthy individual. These students were awarded blue ribbons and are proud to wear them. We feel it will be an incentive to children in their schools next year, to have a teacher who is recognized as a blue ribbon product.

We have a small First Aid kit which we use for demonstration purposes in the rural schools. It is also used for teaching material in the observation school and for emergencies on the playground. This First Aid kit is largely composed of very

simple materials, such as the children can contribute; a piece of wire, a rubber mat from an automobile, a piece of rope, part of the cover of a grape basket. These serve for practical demonstrations in First Aid for the rural schools and so it is included as part of the equipment in the training of these teachers.

In the third year the work developed in the two previous years in rural schools was used as materials. A simple bulletin board made out of burlap served all through the year for posting interested local health news or current events that were correlated with health. It was a very great influence in making the students interested in the work being done in the county and more aware of the health significance in what they read in the newspapers and magazines.

All textbooks were used for correlation study. For instance, the textbook in art was consulted many times in making health posters. The students made a portfolio to file the health material suggested for use in their schools next year. They designed a cover page for their health code. They made original devices for checking on the drinking of water regularly in a school. A paper cup was constructed and put into this portfolio, so that if they wanted to teach the children next year to make a folding cup they could do it. Sometimes children's work developed in rooms taught by former normal school students, was brought into the class and studied as samples of correlations of health and art, music, arithmetic, agriculture, etc.

In physical education again the children of the school were used as materials; they were taught games at recess, folk dances and relay games; a girls' basketball team was organized which played match games throughout the year.

Children as material

In "Principles and Methods" a number of textbooks were used which placed emphasis upon the project method. This method was used almost entirely in the practice school, and was found to bring the best results in the health work.

The New England states, as a project with many health correlations, was developed as a type study and the results posted in the students' project book.

The English textbooks were used for reference in writing original stories on such topics as milk, exercise and sleep. Original jingles and limericks were written on teeth and milk.

Research was done by the class for poems by great writers,

on the topics sleep and rest, and the students prepared their lists and they were mimeographed by the entire class. Each student made a crossword puzzle to use in the practice school for educational seat work. Silent reading lessons on the topics of food and exercise were composed by the class to illustrate approved principles of silent reading, and were later tried out in the practice school. The exercises that proved successful and that the children liked, were mimeographed, and the class was given the entire set to take with them next year to help them in their silent reading work.

A moving picture showing how to combat the house fly proved very valuable. The sand table was used constantly in the practice school. It was used at one time to work out the project called "The Child's Day." Eight students took part in planning how this could illustrate the various activities in which the normal child engages from morning to night. Little figures were used, cut out of paper. The whole project when completed, told quite a story.

A visual summary of the health work in the country schools, brought in to the class, indicated what certain of the schools were doing for the children. This visual representation proved to be very valuable material and aroused a great deal of interest.

Chairman:

Miss Rood has given a wealth of material, and suggests that scales and all the other things she mentions are not material unless they are put into use. It is evident in the work she describes that they are fully used.

Material for mental hygiene

There is one point that I wish particularly to refer to—the use that may be made of material in definitely promoting mental health. So far there has been very little mention made of material which might be useful in this connection.

Dr. McCarthy, can you tell us where to look for such material?

Dr. John D. McCarthy, Instructor in Health Education, New York University; Specialist in Behavior Problems of Children, New York City High Schools:

Five sources occur to me. In the first place the little papers, monographs published by the National Committee on Mental

Hygiene; secondly, a report on character education made by a committee from the New York City High Schools (copies can be secured from the Superintendent of High Schools in New York); thirdly, a paper that can be obtained from the Registrar of Dartmouth College regarding the personality studies which they make of applicants for admission (the basis of the admission to Dartmouth is not solely on scholarship, it is also on personality); a fourth source is the Character Education Institution, Chevy Chase, Washington, D.C.; the fifth, the Joint Committee on Methods for the Prevention of Juvenile Delinquency, 50 East 42d Street, New York. They have three publications now, "Three Problem Children," "The Problem Child in School," and the third, "The Visiting Teacher Movement."

Miss Erna E. Proctor, Director of Health Education, Child Health Demonstration, Athens, Georgia:

Correlations from general literature in mental hygiene

If someone would scrutinize the field of history and the field of literature it seems to me that a vast amount of very valuable material could be compiled that would bear directly upon the problem of the development of attitudes, the emotional elements in junior high schools and senior high schools.

Dr. Wood:

One of our Joint Committee reports called the "Teacher's Part in Social Hygiene" indicating the correlations from general literature of value in the field of social hygiene, illustrates, I think, the point you have in mind. I am sure there are a great many valuable correlations of the type you suggested. The possibilities there have only been slightly discovered.

Dr. J. Mace Andress, Lecturer on Health Education, Boston University and Boston School of Physical Education, Boston, Massachusetts:

I should like to refer to literature in connection with mental hygiene. I think it has tremendous possibilities. One of the maxims of mental hygiene always taken into consideration is that the individual to be healthy has to respond more or less in a natural way to feeling. Now literature offers that opportunity as does also music. Among the various articles which Dr.

Burnham has written for the Pedagogical Seminary is one on mental hygiene which offers an opportunity for the expression of emotions. The only difficulty that we find in this connection with literature and art is that the teachers themselves try to impress upon the child the matter of technique. Frequently the subject of literature or the subject of drawing becomes distasteful to the children, then it is not fulfilling its purpose from the mental hygiene point of view.

Miss Dolfinger:

Just one thing, I have a very strong feeling that the University of Chicago, in the erection of the Ida Noyes Hall, has provided mental hygiene material of the very highest quality for its women students.

Topic 5: WHAT MATERIALS ARE THERE FOR TEACHERS IN SERVICE?

This Includes Both Those Useful for Teachers and Those Suitable for Children

Chairman:

THE special topic under discussion is materials for teachers, those useful for teachers and those suitable for children. In order that we may have the discussion either follow along the lines that have already been suggested or supplement definitely and consciously the ideas expressed, I should like to review very briefly the main ideas expressed. In the main, the discussion has centered around types rather than around specific bits of material in relation to usefulness on the teacher training level. There was very clear emphasis made of the point that there is need for an analysis of the vast amount of existing material and of selection within an accepted grouping of material.

Gaps in existing materials

I believe that in the process of analyzing and selecting there will be discovered great gaps, in fact, I know of individuals working on that problem who in analyzing find great gaps. Therefore, I hope that this discussion will bring out that fact more clearly and indicate what material is needed to fill these gaps.

We are asking Miss Lydia Roberts to commence the discussion on the topic, "What are the materials with which a teacher should be familiar?"

Miss Lydia J. Roberts, Assistant Professor of Home Economics, University of Chicago:

Something has already been said about the evaluation of material and that standards should be set up for that purpose. What I should like to add will be concerning better selection of health materials. In my use of the word "materials" I am thinking not primarily of textbooks of subject-matter, but of the extraneous materials, as pictures, posters, stories, plays, games, and other devcies which are continually being demanded by teachers. There appears to be a woeful lack of discrimination in the selection of such materials. Teachers who have very strict standards in the choice of materials in geography, literature, and other fields will accept anything that relates to health and is attractive to eye or ear, as health materials. This material, furthermore, is used as an end in itself, and if the children are interested the teacher flatters herself that she is teaching health. The first essential in successful health work, it should be emphasized, is that the teacher know the subject-matter of the thing she is to teach. Having this, she may then choose materials which will help to make her teaching more forceful and effective. Let us take some of the types of materials for illustration.

Types of material for illustration

Pictures are valuable in teaching health just as they are in geography and other subjects, and for the same reason. They make the subject clearer and the teaching therefore more forceful and effective. Just because children look interestedly at a picture which deals with a health topic, is no proof that it has the slightest health value. The test is whether it actually does help to further the health aim. Fortunately, there are many pictures which if rightly used do effect this purpose. About the most valuable picture I own is one I got years ago from Dr. McCollum, the picture of the two rats fed with and without milk. It holds the children's interest, it tells a true story in a striking manner, and rightly used can make the milk lesson most effective. Next to the picture of the rats I value most a series of photographs of how one healthy child spends his day. It is a

true story of a real boy and is used to advantage with parents and with children of all ages. Other pictures of real children, of things that help to clarify her subject-matter can be taken by the teacher herself or collected from other sources.

Health stories

I feel rather strongly on the subject of selecting children's stories. Read over the tremendous mass of health stories that have been put out in the last few years and you get almost a mental nausea at the trash and sentimental twaddle of which they largely consist. Any story that is to be presented to children in the health class should first of all be a good story, possessing genuineness, dramatic qualities, and other literary merits. It should in addition be sound as regards the facts presented and should be suited to the intelligence of the children. Few of the stories written conform to these requirements. So far as the health purpose is concerned, it would be far better to tell a good story unrelated to health and teach the health facts as facts, than to use most of the insipid stories now available and make health repellant thereby. A comment made by the superintendent of a normal training school is pertinent here. After watching for several months the teachers of his school teaching health through stories in which vegetables were personified as Charlie Carrot, Tommy Turnip, and the like, he asked, "Why do you health people think you have to cheapen your health material by 'dressing it up' in this way, when the facts you have to teach are themselves so much more fascinating than any made-up story?" This has always been my personal opinion, though if young children can be got to eat the vegetables by this means, far be it from me to discourage it.

But children who have reached the age of reason are much more interested in true stories. Fortunately there is much of true material in the health field which is more interesting than any fairy tale. It seems to me that what we need is not made-up stories, but for somebody to go through scientific and historical and biographical literature, to select true stories that illustrate all these points, and then to write them in dramatic story form. The development of scurvy on voyages of exploration woven into true story form teaches graphically the value of fresh fruits and vegetables, and scores of stories based on the fascinating results of animal experimentation serve equally well to illustrate other points.

I should like to speak briefly on the subject of plays. I wish first to take exception to an assumption made earlier in this Conference that giving a play on May Day or any other time is necessarily a health measure. It may or it may not be, depending on how the play is used. If the play has been developed out of the subject-matter in the health lessons, if the children themselves have worked up the play without strain, if they have presented it at a suitable time and under suitable conditions before small audiences of children or parents, it may be a health procedure of great value both to parents and children. A play taken bodily from someone else with no preliminary health lessons is of lesser value; while given under certain unfavorable conditions it may become an actual detriment to the children. In order to perfect the play children are often practiced to the point of strain, or the play is staged in the evening or under conditions which make for fatigue, overexcitement, and a great expenditure of nervous energy. Such procedure is a violation of the very laws of health the play is attempting to teach, and can but work injury to the children and to the health program.

Our needs in respect to health materials, may I say in closing, are for a weeding out of much of the worthless material, and a collection of more materials of the better type—pictures, slides, stories, which are scientifically sound and which will help to make effective health teaching, not supplant it. A fundamental knowledge of subject-matter on the part of every teacher will enable her to be more critical in her choice of materials and more intelligent in their use.

Weed out worthless material

Chairman:

Miss Roberts has made a very fine contribution. I am particularly interested in the emphasis she placed upon using material that grows out of the actual teaching, that can be developed to serve more than one purpose. Dr. Andress, we should like to call upon you at this time for a general contribution in regard to the materials for the development of mental health.

Dr. Andress:

The subject of mental hygiene has been brought to the attention of this Conference many times. Although we understand in a general way what we mean by mental health, I find even

physicians asking the question, "What is mental hygiene?" Mental hygiene concerns itself with the subject of the adjustment of the individual to the world in which he lives.

On the pathological side we think of the failures that individuals make because of some mental defect. In this field of the abnormal we think immediately of the feeble-minded, of the insane, of the criminal, of people who have nervous break-downs, nervous tension or personality defects. We also think of the people that are simply queer, people who have peculiar obsessions, or those who find it difficult to get along with other people. On the pathological side mental hygiene is concerned with trying to straighten out various sorts of difficulties through some kind of medical treatment or it may be through a process of re-education. One of the most unfortunate effects of the Great War was that a great many individuals, in order to be restored to health needed to be re-educated. It is sad when we find the mental health of the child askew. Here re-education is needed and we might think of it more or less as in the field of abnormal psychology.

Now the other field, the one in which we are all interested and to which I refer in mentioning material, is that of the normal child. I am not going to try to define exactly what I mean by normal child except that I do not mean a child who is simply normal in intelligence, I do not mean an I.Q. between 90 and 110. A person may have a normal intelligence and still be very far from normal emotionally. Personality is a much greater thing than a matter of intelligence.

Keeping the child normal

We are all interested in the normal child, the child that is not particularly a misfit. How can we keep the child normal? That is the problem with which we are concerned. How can we prevent nervous disorders? Nervousness is preventable, also insanity to a very large extent, although we don't know exactly to what extent. We need health workers to keep before us the fact that we are all the time dealing with personality, that back of the physical body is the human mind that is trying to adjust itself to the world in which it lives. If one fails in adjustment, no matter how good a physical body he may have, he has failed practically in everything.

First of all, I want to say that there is a large amount of

material in the market that is not only worthless but more or less injurious. I refer to some of the material which comes out in the popular magazines. Not only is it untrue, but it is absolutely harmful and much of it is so Freudian in its point of view that it is very misleading. We have a great many cranks who become interested in this extreme point of view, hoping to accomplish great things. It is the story of magic. It is Aladdin's Lamp. You are promised health, wealth and everything else if you do so and so. For those of you who are not familiar with the field of mental health, an excellent book to begin with is "Your Mind and You" by Dr. George K. Pratt, published by the National Health Council, 370 Seventh Avenue, New York City. You can read it through in one sitting, but don't do it. Take a longer period of time and reread it. You will find the whole matter condensed in this very interesting volume. Another book I would like to recommend is "Wholesome Childhood"[20] by Dr. Ernest Groves. Dr. Groves is very much interested in the subject of the education of parents and he has made in this little volume some very valuable suggestions for the training of children of different ages. Those of you who are in health work would do well not only to have a copy for yourselves but to try to put it in your library. Get your mothers to read it. The book as the name indicates is exceedingly wholesome.

Good material in the field of mental health

Another valuable little book is Dr. Hart's "The Psychology of Insanity." [21] It is one of the best written books I happen to know. While it goes into the pathological side it also tells a good deal about the normal mind.

One of the most scholarly books which has appeared in this field is "The Normal Mind" [22] by Dr. W. H. Burnham. It represents the life work of Dr. Burnham who has been called dean of the hygiene workers in this country.

Another book that came out last year that I think very highly of is a book by John Morgan called "The Psychology of the Unadjusted School Child." [22] That book again may seem to be on the abnormal but it isn't. Incidentally, I should like to make quite clear that the only way that we understand the working of the normal mind is by observing what happens when

[20] Houghton Mifflin Co.

[21] G. P. Putnam's Sons.

[22] D. Appleton & Co.

something is wrong with the mind. Dr. Morgan shows in this book how children became maladjusted.

Another similar book is "The Challenge of Childhood" [23] by Dr. Ira Wile. It gives a number of cases. I should like to mention the National Committee for Mental Hygiene, 370 Seventh Avenue, New York City, which publishes several hundred pamphlets that are available for a very small sum of money.

Chairman:

The teacher is not to become a specialist because she has read these books?

Dr. Andress:

No. I hope in time we can have in our school systems a mental hygienist who can be called in to advise the teacher. But the teacher will find in this literature suggestions which will help her to bring out in children the right kind of mental attitudes.

Chairman:

I was quite sure you wanted that emphasis made.

Miss Hoefer has been working for some time in the field of health education and has been especially interested in the idea of analyzing and classifying existing materials. I know Miss Hoefer would not want me to lead anybody to think she had solved the problems or had analyzed everything along this line. We shall be very glad to have her contribution to this discussion, with special emphasis on the research studies needed and how materials can be prepared.

Miss Carolyn Hoefer, Staff Member, Elizabeth McCormick Memorial Fund, Chicago, Illinois:

Elizabeth McCormick Memorial Fund, Chicago, Illinois

My discussion of the use of health material is based upon an experiment now being conducted in Joliet, Illinois, by the Elizabeth McCormick Memorial Fund of Chicago. Briefly stated, the problem is to study as far as possible the effect of intensive health instruction upon the physical and mental development of children. There are 452 children in the group. The plan for securing the data includes mental measurements made by a

[23] Thomas Seltzer.

psychologist, a complete general medical examination made by a child specialist, eighteen anthropometrical measurements, achievement tests in all school subjects, physical achievement tests which have been designed to measure certain types of development, data given by the child, teacher and parents including the rating of certain personality traits. The intensive health instruction includes a series of lessons planned by a committee composed of Miss Keith, Supervisor of the Elementary Schools in Joliet; Miss Avery, Supervisor of the Home Economics Department; Miss Hurst, Supervisor of the Nurses; Mr. Slocum, Director of the Physical Training, and the speaker who combined the plans into a unified whole. Joliet experiment

In the formation of the course of study, a number of general objectives were kept in mind. Time will not permit a discussion of the objectives. The specific health aims were outlined as follows:

1. To establish a permanent desire for good health in order to maintain the maximum physical and mental efficiency.
2. To discover and correct those remedial defects which impair the fulfillment of this maximum efficiency.
3. To set up for each child a standard toward which he should strive. This standard is not necessarily the same for each child.
4. To give knowledge relating to health habits aiding in normal growth.
5. Standards of achievement.

In this discussion interest will be centered primarily upon the material used in the fourth aim, that is, disseminating knowledge relating to health habits aiding in normal growth. In order to ascertain what type of material was available (the supplementary as well as that pertaining to the scientific facts to be taught) a survey of the field was made. Although still very incomplete, a brief summary of what has been found may be of interest. There were 399 authors who had made some contribution to health education and their production may be classified as follows:

Books and pamphlets	343
Plays	140
Songs	133
Games	407
Devices	313

A large amount of this material is not scientific and the survey indicates the need of a committee who will investigate the matter thoroughly and eliminate that which is not up to the standard.

This data has been card catalogued under such headings as general health habits, weighing and measuring, food, care of the teeth, posture, exercise, etc. The following table, although incomplete, illustrates the amount available as an aid in the teaching of a few health rules:

General health habits	303
Weighing and measuring	34
Cleanliness	174
Sleep	240
Milk	144

Little material graded

Very few of these stories, devices, games, etc., are graded. A great contribution to health education would be made if someone interested in research would undertake to grade this material.

With this data available, the organization of a course of study in health education was begun. Ordinarily in an experiment of this type, one would begin with the kindergarten or the first grade. But in view of the fact that the tests which were to be used as a means of measuring the effectiveness of the health instruction were better standardized for older children, it seemed advisable to begin the experiment with the third grade children. At the present time the children are in the fourth grade.

The course of study as tentatively planned for the fourth grade consisted of approximately 195 single-spaced mimeographed pages. In addition, 75 stories were given to the teachers in order to get their reaction as to the grade in which they were best adapted. The teachers were asked to criticize the course in regard to the following points:

1. Its relation to the rest of the school program.
2. The degree to which it is temporary or permanent in the school program.
3. The percentage of teachers and pupils in the school included and affected.
4. The practical results which may be measured objectively as compared with the theoretical aims and required knowledge.
5. The degree to which the program in the school extends to the home and the community.
6. The extent to which the program would affect the later life of the pupils.

It has been said that there are four steps in the construction of a curriculum. They are as follows:

1. The selection of objectives, dividing them into ideals and activities.
2. Analyzing them to the limits of working units.
3. Ranking activities and ideals in order of importance, especially from the standpoint of the child.
4. Collecting methods of achievement.

In the use of health material, cognizance of these four steps should be taken. Therefore, in the course of study as used in Joliet, the material was arranged in units rather than lessons as the term is ordinarily used. In health education, a lesson should not be a period of twenty minutes a day for the year but it should be considered in relation to a specific aim. Thus, the regulation of food habits is in reality one lesson and it may take three or four weeks of daily emphasis before a favorable impression is made upon the child and even then it may not be a lasting one.

With this new viewpoint of the word "lesson" it is necessary to determine the type and amount of material which is to go into each unit. To illustrate the method used in Joliet a detailed description of one of these units or lessons will be given. I am indebted to Miss Leach of the Farragut School for the data now presented.

Sleep project, Joliet experiment

Sleep Project

1. *Teacher's Aim*

   To teach that sleep is necessary to a healthy body and to emphasize the necessity of sufficient sleep.

2. *Lesson Plan*

   a. Presentation or stimulation:
   (1) "The Land of Somnus" by Haviland was used.
   b. Activity:
   (1) "The Health Clock" by Turner-Collins.
   c. Information to be given.
   d. Provision for reflection and suggestions for continuing the subject:
   (1) Those involving little time.
   (2) Projects.
   e. Suggestive means for measuring results:
   (1) Informational test.
   (2) From devices used to encourage the establishing of good habits of sleep.

Miss Leach kept a record of the time consumed in teaching this lesson and here is her report.

	Mon.	Tues.	Wed.	Thu.	Fri.	Average
First week	45	35	35	60	20	39
Second week	20	40	20	50	60	38
Third week	45	45	45	30	45	42

A glance at this summary shows the need of revising the amount of material submitted in the plan, since the other alternative of lengthening the time to six weeks would mean that there would not be sufficient time to teach the other health rules. How much material and of what type is to be eliminated is a suggestion for further research work.

Need for research along certain lines

The whole experiment, as far as it has progressed, points to the need of research along the following lines:

1. The elimination of material which is not scientific.
2. The preparation of lessons in serial form for each grade, not divided into small parts but so arranged that a teacher can look over material on a particular subject and feel sure that she can teach it in a given time, one, two or three weeks.
3. The classification of this material according to its purpose. Is it to be used
   a. To stimulate interest, or
   b. To give scientific facts, or
   c. Has it an individual application, or
   d. Does it provide for further reflection, or
   e. Is it merely illustrative?
4. If this material is to be correlated with other subjects, it must also satisfy the aims required in those subjects.
5. If the object is to stimulate interest, first ascertain if the material is old or new, as the method of presentation would differ.
6. The material must make provision for aiding the teacher and be of such a nature that special training is not necessary for its successful use.
7. The final selection of the material should not be based upon the judgment of one person, but upon the judgment of those who are qualified to judge the value of the scientific facts and the methods of presentation.
8. The material should be separated into two parts, (1) the scientific, and (2) the supplementary. The scientific material should be taught in a separate lesson so that there may be no confusion in the mind of the child as to the meaning.

9. The material should be definite. It must contain the scientific facts to be taught in detail, and in addition should contain the supplementary material itself rather than a bibliography. Both the specialist and the teacher are so engrossed in the activities required of them in the pursuance of their other duties that they do not have time to canvass the bibliography to find additional data.
10. The projects and devices offered should include for each unit those which can be accomplished in a short period of time and those which involve a longer period. This makes provision for various degrees of emphasis according to the needs of the group.
11. The health course of study may very easily become monotonous and because of that monotony lose its effectiveness in interesting children. Therefore, a constant guard must be kept to provide for the varied and constantly changing interests of children.
12. The material should be classified according to the type group with which it can be used. Material useful for the rural child is not the same type as that useful for the city child. The same statement may be made regarding the foreign and the American-born children.

In conclusion, may I enter a plea for the formation of committees, such as a first grade committee and a second grade committee. These committees should be composed of two types of persons, those familiar with the factual or scientific phase of health education and those familiar with the methods of presenting the facts to children.

Chairman:

We are glad indeed to have this contribution and the special emphasis on the fact that a lesson is not just a filler of so many minutes but that it has its eye on an objective which has really little to do with the time period involved. We are now going to hear from Dean Gray who has done so much, not only in the general field of education but with special reference to reading. His contribution will, we know, be most valuable.

Dean William S. Gray, Professor of Education, Dean of College of Education, University of Chicago:

College of Education, University of Chicago

I wish to discuss briefly four problems that relate specifically to the use of reading materials in the education of children.

Within the last five or ten years, one of the most important tendencies in elementary education has been to enrich the experience of pupils through contacts with nature, with their environment, with concrete objects which are brought into the classroom, through museum materials, through pictures and through all other types of materials to which Miss Roberts and Miss Hoefer have referred. The value of these sources of experience cannot be overemphasized. Ultimately, however, we must depend upon the child to enrich his own life through what has been printed. Therefore reading materials assume a place of large importance in the general process of educating the child and in making his life as rich and wholesome as possible.

Importance of reading materials

The fact is widely recognized that children must read widely in history, biology, science, literature, etc., in order to secure the important contributions which each field has to make. There are three values to be secured from reading. The first is that wide reading leads to a well-rounded mental development so that the child is well-informed and has wholesome views concerning the world, its people, and their various activities. In the second place reading supplements what the child gets through concrete experience in developing what we may call centers of interpretation. For example, the child needs to have, with regard to health matters, bodies of information relating to the problems with which he is confronted, in order to find valid solutions. Until we can give the child a sufficiently broad intellectual background, we are never going to succeed in solving health issues. We may train the child to follow directions. So far so good. But once he is confronted with a totally new situation, he will be unable to act intelligently unless he has a sufficient background of information to aid him in reaching an intelligent decision.

In the third place, the wide reading material, if properly organized and well written, contributes to the development of permanent interests in any particular field with which the child is dealing. We are just as interested that children should acquire deep and permanent interest in reading materials relating to health education as we are that they should find permanent interest in reading good literature, in reading biology or in reading in any other important fields of thought. In my judg-

ment health education does not differ from any other field or interest with regard to the demand for wide reading. We need to make reading just as important and essential in our program of health education as in history, geography or literature.

The second point on which I wish to comment relates to the significance of preparing simple, interesting reading materials in the field of health education. I believe we are correct in assuming that we will never get across the program of health education until those of us who are interested in the facts, information and techniques of this field prepare a wealth of material that can be put into hands of the teachers and pupils to use. If you go into the classroom today and ask, "What are you doing in health education?," you will find keen interest, and an effort on the part of teachers to do as much as they can. You will also find that the great need is for accurate, scientific material to use in presenting the important topics. I do not believe that we can depend on the classroom teacher to develop the material that is needed. Very few have had the training that will enable them to go to libraries and find the materials that are essential. Unless they have had unusually broad training in the field of health education, they will be unable to select that which is most valuable. One of the biggest problems, therefore, that this Conference faces is to get valuable materials in shape that can be put directly into the hands of the pupils. I believe there is need of a National Committee, subsidized generously by some organization or foundation, that will set thoroughly trained people to work getting together the material that can be used in public schools.

National Committee on health education materials suggested

May I give at this point, a concrete example of the effectiveness of providing materials in a new field? When President Wilson, during the Great War, called on school people to devote more time to the problems of community life, the superintendents all over the country said, "We haven't the material, we can't do what you want." The President met the situation by appointing a committee which in the period of a year prepared about fifteen hundred pages of material known as the "Leaflets on Community Life and Civics." What happened? Within three months after that material was available, school systems all over the country were teaching a new type of civics.

I believe a similar condition exists in the field of health education. We must prepare needed material. It must be prepared in form to put into the hands of the pupils as well as the teachers. This material should aid first of all in establishing the attitudes and habits that are fundamental and important in living vigorous, wholesome, healthy lives.

In the second place, reading is essential in securing continuity in physically wholesome living. The problems of child life as far as wholesome living is concerned are different from the problems of the maturing young man or woman and from the person of forty, or fifty, or older. We teach in the schools today how to live healthy, wholesome lives as children. What are we going to do to prepare them to live healthy lives in later years? The solution of these problems lies in developing permanent interest on the part of the child in the general field of health and revealing to him the sources of information to which he can refer in solving these problems from year to year as he meets them in different stages and periods of life. In other words, I should like to see our schools present health education in such a way that the child or youth will learn to seek for information concerning health matters during leisure hours just as he seeks information or pleasure in the field of literature.

What are the types of materials that are needed? I do not assume that I am competent to speak with respect to these matters. I shall have to leave that to those of you who are better qualified than I. I am, however, going to comment briefly on types of material needed in any field. I believe my comments will be as applicable to the field of health education as to history, biology or any other subject.

Different types of material

First, there is textbook material which requires careful and intensive study. In the second place, we need recreational reading material about health matters. In the third place, we need to put into our schools, current publications, newspapers, magazines, government bulletins, reports of committees and other sources of information that present health material. It is as important, if not far more so, to build up our libraries with materials of this type, as it is to fill our libraries with volumes of Shakespeare, Addison, Milton, and all the rest. If you go into a school library today and ask for materials on health edu-

cation you will find very little available. Now we need to make teachers and administrators conscious of the fact that such material is essential as one step in this direction. I have been lecturing in my course on "Investigation in the Field of Reading," concerning the importance of including this type of material in reading programs.

Reading material should be true, simple, and graded

The next section of my discussion deals with certain technical matters that should be considered in preparing reading materials relating to health problems. In the first place, I agree most heartily that it should be real. We do not need to pervert real facts in order to make them interesting. There has been a tendency among some writers of geography, history, etc., to modify facts in order to make them interesting. Studies made at the University of Wisconsin show clearly that informational material is as interesting to children as fiction. The second point is that if we are going to enlist the hearty cooperation of children, this material must be relatively simple. We must make the reading materials sufficiently easy so that the pupils can direct their attention primarily to the content of what they are reading. It is equally important, however, that the teacher of health assume responsibility for teaching pupils to interpret and make judgments as they read.

This leads to the third issue, namely, the grading of material. I do not believe that we can grade the material to such a high degree of refinement as to meet the needs of each grade separately. I do believe, on the other hand, that we can prepare materials at two or three levels. The beginning level for first and second grade children must of necessity be the very simplest that can be used in preparing good clear sentences. The material for third and fourth grade children should correspond in difficulty with the vocabulary that children use in their ordinary speech. For pupils in the more advanced grades, the material may be somewhat more difficult than their ordinary vocabulary, but it should be far less difficult than that ordinarily presented in fifth and sixth grade history texts.

The next point I should like to emphasize is that this material when written must be highly charged with interest, whether it be of the story or of the informational type. Two or three studies in the general field of children's interests in reading sug-

gest helpful information along this line. These studies show that the interests of children are really very broad and that surprise and plot appeal very strongly to the children of the primary grades. Professor Uhl has found that dramatic action, adventure, heroic action, interesting characters and home life or child life are of increasing interest to children in the fifth, sixth, seventh and eighth grades. I believe that we should determine the interest elements in the field of health education. One of the problems mentioned by Miss Hoefer, the importance of which I should like to emphasize, relates to a series of studies to find out what are the things in the field of health education that appeal most to children at different levels of advancement. I know of no such studies that have been made. At the present time the studies by Dunn and Uhl simply give us cues as to what we might expect to find.

The next point which I shall discuss is one to which very little attention has been given, but one which merits serious consideration. We must adapt reading materials to the purpose to be accomplished. For example, if our aim is to have the child learn or master certain facts, then condensed types of material which can be read and reread serve the purpose best. If, however, the aim is to make application of specific facts then the material should be so organized that the facts relate to a problem in which the pupil is interested. In other words, the mere discussion of facts is not adequate; the facts must be incorporated into a problem or project which requires their utilization.

Extensive or intensive reading?

Or again, if it is the purpose to extend the range of ideas of the pupils with respect to health facts, then extensive reading is far better than intensive reading. A recent experiment shows very definitely that if you read two hundred words, for example, you will secure a certain number of facts. If you reread that material you will secure two or three more items out of it. If you spend the time for the second reading in reading a new body of material, you secure a much greater contribution to your stock of ideas. Therefore, the purpose for which one reads or studies a particular problem determines whether or not the materials read should be of the extensive or intensive reading type.

Your Chairman asked me to comment upon the extent to

which attitudes and ideals can be cultivated. I had assumed that they could be and was not going to argue that point. They can be cultivated through reading in all other fields and I do not believe that the field of health is an exception.

The final point I want to make is that we should assume responsibility for acquainting pupils with sources of information and for teaching them to interpret health facts contained in current materials. This means that as early as the fourth grade we should begin to present diagrams and tables relating to health problems and to teach the pupils to interpret their meaning and significance. We must also acquaint the pupils year after year with various sources of information which are valuable, so that by the time they have completed their junior or senior high school work they will have a broad knowledge of the sources of material and their relative values and merits.

Form of material

In closing, I wish to speak briefly with respect to the form in which material is printed. Dr. Bamberger recently published a monograph entitled "The Effect of the Physical Make-Up of a Book upon Children's Selection." [24] In this report she suggests a number of points that may well be borne in mind in making a book that will appeal to children. For example, the size appears to be a factor in the selection of books. The small volume does not appeal as strongly as a larger book. The size most acceptable to children in the primary grades appears to be about 7½ by 5½ by 1 inch thick.

Another factor in determining children's selections appears to be the cover. The color of the cover exerts an influence. Brightness is pleasing to children; blue, red and yellow are favorite colors for covers. If we are going to take advantage in the field of health education of all the information that is now available we must consider the physical make-up of the material which is put into the hands of children.

Chairman:

I cannot express to Dr. Gray the gratitude we feel for this very real contribution. It re-emphasizes what this Conference is attempting to do, namely, to bring over into the field of health

[24] Studies in Education No. 4—Johns Hopkins, Baltimore, Md.

education the standards that are being developed in the educational field with reference to other subjects.

Miss Arrowsmith of the National Safety Council is here. I know her organization has been making a study of material. We are eager to know whether they have found certain types helpful. This is a field of interest that logically belongs in health education.

Miss Mary Noel Arrowsmith, Executive Secretary, Education Section, National Safety Council, New York City:

National Safety Council

I am very much interested indeed in the discussion of materials today because we started with a practically blank field about three years ago. There was not any material to speak of. First we thought that the idea of safety, the protection of human life, had such immense vitality that it was going to go along on its own legs. No material was needed, just the idea. We found very soon that wasn't true. If we wanted to get anywhere with the schools we had to have material to give the teachers, the more concrete, the more simple and the more detailed the better. Of course, it was a new field to which they had given very little thought and in which they needed specific information and help. We have been trying to find out in the last two or three years from the schools themselves just what kind of material was most helpful.

People may say that safety work is a small part of health. Well, in one sense it is, but we think that safety, health and thrift are a part of a very much larger problem of conservation and that safety is simply the starting point for getting children to think about the value of human life, health and the conservation of all that makes life worthwhile, as well as not getting hurt themselves. They are not particularly interested in the idea represented by that slogan that unfortunately you see in so many places which reads "Don't Get Hurt." Please don't put the responsibility for that slogan on the National Safety Council. That is not what we stand for.

The concrete, immediate thing we have to do is to give help to the school which wishes to introduce safety instruction. The subject-matter that we have to start out with is, of course, facts in regard to accidents. I think many of us, at first, thought

that all that was needed was to tell the children to be careful. We found out that that was not true. There is really a great body of subject-matter connected with safety.

I was concerned in looking over some posters published by a national organization to find a safety poster that said, "In Crossing the Street Look Right and Look Left." Now, of course, that is the perfectly obvious thing not to do. It shows how little people think of what the right thing is, and so accurate subject-matter on how accidents happen and the kind of accidents that happen is very important. The methods for the application of subject-matter are very much the same as in health education. We have got to find a way to get it into the the school without adding too much to the curriculum so we have laid a great deal of emphasis on the correlation of safety ideas and safety projects with the ordinary lessons in the curriculum.

May I say a word about the actual printed matter available for people in this field? There are a great many school systems now that have worked out their own safety courses of study and suggestions for teachers. This seems to us to be very important and very valuable because it takes up particular local situations. Then there are several national organizations that publish safety material besides our own. The Highway Education Board gets out a very good set of safety lessons every year. Miss Harriet Beard of Detroit has written an excellent textbook which gives both information and a large number of suggestions as to correlations with the regular school work. The National Safety Council is working out a well-rounded collection of materials so that the teacher can have the various kinds of tools that she needs to work with.

We are still very young in this work and we have no hard and fast convictions. So far, we have worked as a clearing house of information between schools that have developed safety work successfully. Material secured thus we have published in various forms and handed on to other people. We now have a Teacher's Hand Book, on the principles of safety education, and a magazine that gives teaching devices, information and visual aids, as well as a growing collection of material on special aspects of the problem of safety education.

Teachers Hand Book and Magazine on safety education

Chairman:

Thank you. We want also to hear about materials for dental hygiene from Miss Schmidt.

American Dental Association

Miss Evelyn C. Schmidt, Director, Department of Dental Health Education, American Dental Association, Chicago, Illinois:

In view of the fact that diseases of the mouth are perhaps the most prevalent defect found in the school child, that aspect of health naturally becomes important and dental health fits, as one spoke, into the wheel of general health. We find that in most of the health books emphasis is placed on dental hygiene because up to a short time ago most of the information that people received about dental health was received from commercial sources. Most of this material was unscientific, all of it was biased and naturally so. The toothbrush people wanted to sell toothbrushes, and the toothpaste people, toothpaste, and consequently the idea which predominated was brushing the teeth with toothpaste twice a day. We know now there are many other factors.

About a year ago the American Dental Association established a Department of Dental Health Education. The chief trouble with that department is that it has growing pains, but we have something to offer you at present and as time goes on we hope that if you write to us about your teaching problems we may be able to supply you with sound, scientific information, so that you will not have to use material from commercial organizations.

Some sources for sound material on dental hygiene are the American Dental Association, United States Public Health Service, New York Association for Improving the Conditions of the Poor, and the Philadelphia Child Health Society. In parting may I say without doubt the best book for anyone who doesn't want to study the question too deeply is, "Teeth, Diet and Health" [25] by Thoma.

[25] Century Co.

Chairman:

Thank you very much Miss Schmidt.

Is there any suggestion on the part of anyone here as to a line of study or a further question that you would like to raise for the Conference to consider? Mrs. Taylor, is there any contribution you would like to make with reference to the question from the angle of the librarian?

Mrs. Mary W. Taylor, Librarian, Elizabeth McCormick Memorial Fund, Chicago, Illinois:

I might just say that we are in close contact with a great many teachers of health, both trained and untrained. As they come to the library, I have, for the last couple of months, been very much interested to see the change in the type of questions that they are asking and to find out just exactly the type of material that they have found in the library that is useful—the type of thing they would like to have, that is not available. I have a list of the things they have been asking for.

What teachers ask for in the libraries

Miss Roberts and others will be delighted to know that the thing I have listed first, as being asked for most, is more subject-matter that they can rely on. The second thing they ask is that materials be carefully and correctly graded. Another question always is, "Why doesn't the State in which I live have a unified program so that I would hear more at teachers' meetings and at institutes and so that we may have group action?" Then these teachers ask for simple lessons that they may use; they ask for more reports; they wish that people who are doing work would write it up even though they are not entirely satisfied with what they are doing, and publish in educational journals so that all teachers might have the benefit of the experience of others. Again, they ask where they can get a correspondence course in health work; they ask what the colleges are doing in the way of research work; they want published reports of those researches. Even while we are dealing with the teachers who are not trained in health work we must remember a great many of them are trained teachers and are able to read those reports. Finally they ask for sources of material.

Chairman:

I think that is interesting. You notice, a large per cent of requests were for ready-made crystallized material. May we hope for a larger use of materials evolved from the particular situation in which teachers and pupils have a part?

Summary of Section III

MATERIALS FOR HEALTH EDUCATION

Definition of Health Education Materials

HEALTH education materials are those which are useful in developing habits, establishing attitudes and acquiring knowledge in relation to health.

In developing habits the materials which are most useful are those which provide opportunity for healthful activity, i.e., facilities in schools and homes which provide the equipment for doing the things taught as fundamentals to healthy living. Teaching materials in relation to cleanliness include the facilities for keeping clean; adequate instruction in selection of foods requires opportunity for selection and such materials as will guide right selection.

Materials most useful in developing attitudes are those things which will increase the child's experience. Plants and animals furnish firsthand material on which the child can observe the practical application of his knowledge. It is also suggested that, without undue self-consciousness, the child will observe in relation to himself, the application of health knowledge.

Actual observation of the activities of public and private enterprises supplying the communities' needs will also provide material for enlarging the child's health experience and knowledge—such as dairies, farms, city water plants.

Where such firsthand observation or experience is not possible the motion pictures may provide a substitute.

The printed page must supplement, correct, interpret and enlarge these primary life experiences and points of view which the child gets through activity, from coming in contact with and observation of something real. In addition to the textbook,

knowledge must be acquired from many sources, of particular value being those current which have the quality of reality, such as newspapers, magazines, materials from federal, state and municipal departments and findings of research laboratories. Such material should be selected according to sound scientific and educational standards.

Criteria for Evaluation

The following statements concerning the educational criteria which should be used for evaluating these materials were considered to represent the best contributions on this subject.

If we conceive of education as a process by which children are changed in ways which make for fuller, better living, the educational criteria for health material may be summarized as follows: What materials will produce the desired changes? What materials are dynamic in that they engage the child in the search for health knowledge, lead him to build and persist in health habits and enlist his active attitude toward the health aspects of his own experience? To do this, materials must be broadly related to actual experience and adjusted to the child's level or growth stage.[26]

Educational Criteria for Evaluation of Materials [27]

1. What is the underlying philosophy inherent in the material?
   - *a.* Regarding health
     - (1) Is health considered in relation to the mental, moral and social, as well as physical aspects of life?
     - (2) Is the attitude toward health positive rather than negative?
   - *b.* Regarding education
     - (1) Is education considered as a "process of improving the quality of human life" rather than as a preparation for adult life, a storing of information, or a process of mental discipline?
     - (2) Is the material adapted to the needs of the group for whom it is intended?
       - (*a*) With regard to differences in age and development?

[26] See contribution by Miss Zirbes, p. 254.

[27] See contribution by Miss Lerrigo, p. 251.

2. What is the basis for progression?
   a. Is provision made for increasing difficulty in vocabulary and ideas?
   b. Changing needs of children?
   c. Enlarging responsibilities of children?
   d. Interest in enlarging community?
3. Does the material encourage self-guidance?
   a. By encouraging the habit of intelligent solution of health problems?
   b. By giving scientific background?
   c. By presenting some practical problems of hygienic living?
   d. By creating attitude of interest?

NOTE.—Different kinds of materials serve different purposes; i.e., stories are more useful in creating attitude than in giving scientific information.

4. What is the basis for the selection of subject-matter contained in the material?
   a. Opinion of author?
   b. Opinion of committee?
   c. Analysis of actual health needs and problems:
      (1) Of children?
      (2) Of adults?
5. What is the quality of the information subject-matter?
   a. Is it scientifically accurate?
   b. Is it of practical value in helping pupils to safeguard their own health or that of the community?
   c. Is it of psychological value in creating attitude of interest?
6. What are the social values of the subject-matter?
   a. Does it deal with personal health?
   b. Does it deal with well-being of contemporary community life?
   c. Does it deal with the future well-being of the race?
7. Does the material preserve the values of the arts involved in its preparation? With regard to
   a. Use of English?
   b. Art?

MATERIALS FOR THE SECONDARY SCHOOL

The following types of material were brought forward as particularly useful on the secondary school level:

1. Materials which provide opportunity for healthful ac-

tivity. (The school cafeteria as educational material was especially noted.)

2. Materials which increase the individual's experience by actual observation of health activities.

3. Those current sources of information which have the quality of reality.

4. Material from informational sources, applicable to the immediate environment (City and State Boards of Health bulletins, etc.).

5. Laboratory equipment which makes visual through experimentation or gives firsthand information relative to personal and community health.

Materials for Teacher Training

On the teacher-training level these same types of material were also noted as valuable, and in addition the following were mentioned:

1. Texts which furnish scientific information, educational principles and standards of measurement.

2. Material from informational sources including official and non-official agencies, conference reports, surveys and reports of research.

3. The practice school itself is unmined material, together with its equipment and apparatus used, including the children themselves and the use of the entire community in its health aspects.

4. Material also valuable in teacher training is that which may be used to train the student's judgment in recognizing the validity of subject-matter.

Materials for Use of Teachers and Suitable for Children

The discussion disclosed a tremendous mass of material of varying degrees of usefulness and adaptation. This situation calls for a study of material collected from all available sources and evaluated by sound educational criteria.

In the selection of material, adaptation should be made not only to the level of the student group but also to the resources of the community in which they are being prepared to work.

The discussion brought out the fact that there is need for additional material along the following lines:

1. Pictures which will further and illustrate the particular aim of the class.

2. Direct stories of real experiences from the fields of history, scientific literature and biography.

3. Materials which are an outgrowth of children's experience and represent child activity.

In the use of material other than informational, care should be taken that this material be used as a means rather than an end in itself.

Standards for Reading Material in Health Education [28]

1. Recent tendency to enrich experience through wide reading in all school activities.
   - *a.* Leads to well-rounded mental development.
   - *b.* Develops centers of interpretation.
   - *c.* Establishes permanent interests.

2. Significance of adequate provision of reading materials in the field of health education.
   - *a.* Necessary in insuring success of the movement in public schools.
     Rapid adoption of community life leaflets during the War shows the importance of providing materials for teachers and pupils to use.
   - *b.* Essential in providing much of the information needed. Facts, models, examples.
   - *c.* Essential in insuring continuity in physically wholesome living.

3. Types of material needed:
   - *a.* Study types.
   - *b.* Recreational types.
   - *c.* Current publications.

4. Points to be considered in preparing materials:
   - *a.* Reality, ease and simplicity.
   - *b.* Highly charged with interest.
   - *c.* Adapted to level of child for whom prepared.

[28] See contribution by Dean Gray, p. 305.

d. Adapted to the purpose to be accomplished whether it is to learn or master facts; to apply specific facts; to extend range of ideas; to cultivate attitudes and ideals organized to make deep and permanent impressions; to stimulate interest in health problems; or to acquaint pupils with sources of information and to teach them to interpret data.

It was also stated that if we are going to enlist the cooperation of the child, the material must be somewhat easier than the grade so as to direct attention to the problem in hand instead of to the mechanics of reading.

The Summary of Section III was prepared by the following committee:

Miss Mary E. Murphy, *Chairman*
Miss Anne L. Whitney, *Secretary*
Miss Juliet Bell
Miss Cara L. Harris
Miss Carolyn Hoefer
Miss Edna Keith
Miss Marion O. Lerrigo
Miss Lydia J. Roberts
Mr. E. F. Van Buskirk
Miss Laura Zirbes

Recommendations from Section on Materials for Health Education

It was the final conclusion of the group that the development and improvement of health education materials will be furthered by three types of endeavor: (1) Constructive study; (2) investigation; and (3) research.

The three lines of work above suggested are interrelated and support each other and, therefore, no attempt is made to arrange suggestions in sequent order.

Constructive Study

1. Pictures and other graphic materials which further the aims of health education should be collected and collections made available for circulation for classroom use.

2. True stories from the fields of history, biography, science and literature should be selected or written for use in health education.

3. Individual classrooms should be used as sources of vivid, fresh materials which are the direct outgrowth of pupil experiences and classroom activities.

4. Qualified agencies should undertake to furnish critical analyses of current scientific material as a professional service.

5. Materials valid from the standpoint of content should be adapted not only to the level of the student group but also to the particular needs and resources of the community.

6. Ways and means should be discovered for training the critical judgment of students in respect to the scientific soundness of subject-matter.

Investigation

1. A critical analysis should be made of the tremendous mass of available health materials and evaluation and allocation should proceed in the light of sound educational criteria.

2. Studies should be made for the purpose of determining what health knowledge children need.

3. Studies should be made of children's interests in the field of health knowledge.

4. Health education reading materials accepted as sound, should be compared with the standard reading scales, and in accordance with these, be assigned to their proper grade level as a means of assisting teachers in right selection.

5. The practice school itself should be investigated as an unmined source of health materials, together with its equipment and apparatus, including the children themselves and the entire community, in its health aspects.

6. The impressions, opinions and experiences of large groups of teachers in rural sections and small towns should be collected as a basis of adaptation of health materials.

7. Particular types of material should be examined for their adaptability to the attainment of specific objectives and purposes.

8. The specific effectiveness of material should be determined.

Research

1. Health materials should be analyzed for the purpose of discovering to what extent they are dynamic and effective in securing desired action on the part of children.

2. Textbooks should be analyzed to discover causes of difficulty and factors which impede comprehension.

3. Studies should be made to discover what are legitimate incentives as opposed to inducements used in health education.

4. Ready-made visual material should be critically compared with original visual materials produced by children with reference to their effectiveness in furthering the aims of health education.

The above recommendations, as well as those following Sections I and II, were prepared by a committee appointed by the General Chairman of the Conference, as follows:

Dr. Thomas D. Wood, *Chairman*
Miss Emma Dolfinger, *Secretary*
Dr. J. Mace Andress
Mr. A. S. Barr
Miss Juliet Bell
Miss Carolyn Hoefer
Miss Marion O. Lerrigo
Dr. John D. McCarthy
Miss Mary E. Murphy
Dr. J. Anna Norris
Mr. Delbert Oberteuffer
Miss Lucy Oppen
Miss Ethel Perrin
Miss Anette M. Phelan
Miss Lydia J. Roberts
Mr. John W. Shepherd
Professor C. E. Turner
Mr. E. F. Van Buskirk
Miss Emeline S. Whitcomb
Miss Anne L. Whitney
Miss Laura Zirbes

CLOSING SESSION OF THE CONFERENCE

Chairman: Dr. Thomas D. Wood

Chairman:

AT this final session of this Conference on Health Education we are to have as our first speaker Professor C. E. Turner of the Massachusetts Institute of Technology who will discuss "The Next Step in the Development of the Health Education Program."

The next step

Professor Turner:

Health education is the child of two estimable parents, public health and public instruction. Thanks to the foresight of those who cared for it during the days when it needed frequent feedings (Dr. Holt, Miss Jean, Dr. Wood and others), it has safely passed through the period of infancy, that period of greatest mortality for ideas as well as for individuals. It promises to do more for both branches of its family than any child which has appeared on either side of the house in a long time. It has been recognized as a child well worth rearing. It will prolong life and increase happiness as much as any of its cousins in the public health family. It will bring to the people of the world as many serviceable gifts as any of its cousins in the education family. It will bring its public health uncles nearer the people, and make the family better understood. It will help to interpret the child to its educational uncles, reducing the stern rigidity of the curricula in which they are garbed, and aiding in the movement to interest the various branches of formal education in the child instead of the subject.

This child, health education, has passed a normal infancy. It was fond of fairies and clowns. It may even have believed in Santa Claus. It played absorbedly with one device at a time. It was such a unique and attractive child that everyone's attention was called to it. That was healthful and most desirable. If

these things had not happened, it would not be the robust youngster it is today.

But children must grow up. If you reckon the age of this child called health education, you will find that it is about to enter adolescence. It is passing from a child to youth. The varied, changing interests and motives of childhood are about to be transformed into those more settled interests which will make and characterize the adult. It must take its place among the tried and trusted servants of the race.

May I suggest in passing that those of us who are most interested in this growing youngster should take such opportunities as present themselves, to bring it to the attention of both the families whence it sprang. If it is useful, it must have the confidence and help of both. Those of you who have attended recent educational meetings, know the interest given to health education. In the public health movement the last few years have been characterized as the educational phase. We need to mix with those professionally engaged in both these fields for the benefit of the cause and the community. The Child Hygiene Section of the American Public Health Association, the School Health and Physical Education Section of the National Education Association and the Preventive Medicine Section of the American Medical Association are natural points of contact.

We have been here for a week in the serious and profitable consideration of our problems. Thanks to the wise counsel of Dr. Wood, for whom our fondness continually grows, and to the indefatigable energy of Miss Dolfinger, to whose foresight and vision we owe the Conference, there is one thought in this group, one ambition—the advancement of health education. We have worked in a group free from professional jealousies and from the politics which sometimes creep into even the most learned of professions. There are certain facts which stand out from these deliberations.

The advancement of health education

The forces of health education have made a wonderful advance. You have indicated that the immediate task is to consolidate our present position. This is to be done in two ways: by improving our methods and by proving and demonstrating our results. This means that we are still in the experimental stage. We must adopt all of the best standards and practices

in education which are adaptable to our field. Some of these are suggested in the proceedings of this Conference. We must go further and develop special procedures demanded by the peculiarities of health education. We must conform to the principles of public health and join hands with public health administration.

A few standards may be borrowed and adapted. Many will have to be developed. Who will do this work? It is not a problem for a single laboratory or a single researcher. Social evolution like human evolution develops by the multiple production of ideas and the survival of the fittest. Dr. Wood's Joint Committee can solve many important problems. The American Child Health Association can maintain a liaison, conduct national surveys and research of the greatest value, but the problem really belongs to every worker in the field. The natural agencies through which this work may be done are the universities and the field workers of both official and unofficial agencies.

We need a check upon our procedures. We need such investigations as those indicated in the conclusions of the Conference. We need to gather innumerable facts which have never yet been brought together. We need scientific observation. Sometimes that is quite as valuable and less tedious and expensive than research. You remember that some years ago it was believed that animals could synthesize fat only from fatty materials. The controversy was settled when Leibig pointed out that the cow was continuously synthesizing fat from a diet of grass. Oftentimes we set up elaborate investigations to test a fact which could be as readily proved.

Scientific observation and controlled experimentation

Other problems demand controlled experimentation. We need the principles of laboratory experimentation applied to this field, the determination of the result of a given set of conditions carefully checked by the results obtained in another set of conditions differing only in one fundamental respect—health measures studied by health experts, and educational measures studied by educational experts. If I voice the expression of this Conference correctly, you are making a definite appeal to universities, research institutions and field workers to attack these problems.

You are demanding more scientific attention to the materials

of health education. You are asking that further materials be produced, but that arm-chair production shall cease, and that the new materials developed shall be produced in accordance with known standards and the needs determined by experimental procedure. You are asking that investigations be made to determine the standards, quality and relative value of the various educational materials, and you are asking for controlled research to determine the effectiveness and results obtainable from the various materials in existence. While making these demands, let us not forget to use the materials which exist, in accordance with the best educational methods, and let us remember that in spite of the multiplication of materials during recent years, the majority of our school children are still without an adequate supply.

You are demanding the scientific and efficient organization of health procedures in teacher-training institutions and in the school system. We must have more definite knowledge of the child as he enters the secondary school; his health practices, health knowledge and attitudes, his health interests and his physical status. Similar information must be gathered concerning the teacher when she begins her training.

You are demanding a more careful study of the subject-matter, the courses, the activities, and the daily program of teachers and pupils. You ask for the coordination of all these activities and the more unified relationship of the various departments of education which contribute to health education in order that we may secure more effective motivation without discarding the standards of the various branches of learning.

What this Conference is demanding

In short, you have asked the members of this Conference to gather more exact information concerning the nature of the individuals for whom health education is provided, and concerning the quality and usefulness of the health education procedure now in vogue.

You are demanding also that the results of health education be measured in terms of habits, knowledge and health improvement. Health education is selling itself in countless communities, but that is not enough. If it is to be regarded as sound public health procedure and not a nebulous, vapid haze of enthusiasm, we must be able to describe specifically its possibili-

ties and accomplishment. Education and public health both demand it. Some measurements have already been made of habits, knowledge and health improvement. This Conference suggests that these measurements be checked and extended. Here is another field of research procedure.

While we are considering research, let us not forget its threefold usefulness. One use of research is to discover new facts. A second use of research is to engender confidence, and I would suggest to you in introducing your program in a new community, that you introduce it with the research attitude which allows you to present to the public a program of probable value and then to test it. In the testing process the program will be adopted by the community and become its own. Research is, in fact, a method of introducing a health education program. The third use of research is to teach, and the universities of the past generation have declared that there is no superior method.

Research and investigation

This Conference has considered only a part of the problem. We have not considered the integration of this work as a part of the public health program of the community. We have not considered its cost or, in detail, its health accomplishment. We have not considered the pre-school child or the basic science upon which health practices rest. May I particularly call your attention to the need of research upon the laws of health as well as upon the measurement of health? The laws of hygiene may rest upon natural laws, but they are not the same. You may recall the story of a small American republic, in the senate of which a member objected to the issue of paper money because he stated that according to Gresham's law, a cheaper currency would drive out a better one. Another member arose and suggested that Gresham's law be repealed. Tennessee may try to repeal the law of evolution, scientists are "repealing" what have been regarded as the laws of health. Consider the changes which have been made in the last two decades by the new knowledge of vitamins, of sunlight, of ventilation. Do you suppose that all other rules are going to stay unmodified? Consider the reasons for the care of the teeth, or try to draw a line between æsthetic and health values of cleanliness. We need investigation. We must teach the soundest knowledge available, but there is danger

to the movement if it lacks the support of respect-commanding science.

We need the study of materials, methods, subject-matter, individuals, groups, accomplishment. We need the aid of all the specialists and the best scientific principles; and we need to prevent enthusiasm from claiming results which are not scientifically proved.

We are in a field of rapid progress and great promise, a field of service, a field where sound and logical thinking, together with hard work, leads out to new vistas and new possibilities. We need better methods, but let us not forget that the great majority of American children have not yet received even fair health training. Let us measure results, but not lose confidence in the quality of the work which has been done to date. Let us be critical of our procedures, but flaming apostles for the cause. Let us develop technique, but be careful that it does not become so big as to hide the child.

Let us go home with a stronger belief in the service we are rendering, taking with us the list of problems before us, and the new standards we have gained. Let each make his contribution to the advancement of the art without reducing—but rather by strengthening—the quality of service to the children he may be so fortunate as to reach.

Chairman:

The task is given to me of speaking briefly on the "Correlation of the Conclusions of the Conference with the Interests of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association."

Some impressions of the Conference

May I give very briefly some of the impressions which have come to me partly through my office and vantage ground of Chairman of General Sessions of this Conference? In the first place, I think we have gained beyond previous conferences with which I have been familiar, a more comprehensive definition and concept of health, corresponding to the general definition of this term in the Health Education Report of the Joint Committee.

I will not take the time to read from that, but to remind you that health, as set up in that report, based upon the construc-

tive contributions and the approval of the Technical Committee of the twenty-seven experts in the field of health, gives definite place to the physical, mental, social and moral well-being of the human individual.

In the second place, there has been given in this Conference a broadened and added emphasis to the educational foundations and the principles related to health education. Through the contributions which we have received from Professor Bobbitt and Dr. Gray, of the faculty of the University of Chicago, from President Owen, of the Chicago Normal College, from Professor Barr, of the University of Wisconsin, and from Miss Zirbes, we have been very fortunate, I believe, in having this distinct, constructive and most valuable help.

We have in the next place had suggested to us new and more promising types of organization for the health program in different kinds of institutions by the promotion of the idea of interdepartmental committees and organizations, to bring into operation a coordination of the many departments and many instructors in a unified, synthesized and definite program.

I do not mean that this has been accomplished, but we have had practical testimony advocating such forms of organization.

In the fourth place, we have what is perhaps the most valuable and distinctive contribution and result of this Conference —a list of studies needed in relation to health of children, health education in the secondary schools and the training of teachers who should be qualified to contribute to a health program; also those studies needed to insure provision of sound and adequate materials for health education at each of these levels.

List of studies needed

May I say that all of this is extremely gratifying to me, in my position as Chairman of this Joint Committee, which committee has been working for fifteen years now, in this general program? The committee doubly appreciates the extent to which the report of that committee has been taken as the basis and guide for the deliberations of this Conference.

This health education report did not attempt to solve all the problems of this field of health education, but primarily to set up several fundamental definitions; to suggest the range, extent and boundaries of subject-matter material, of the fundamental knowledge which is required for the training of the teachers. It

was clearly understood not only by the members of the Joint Committee which acted as a reviewing committee, but also by the Technical Advisory Committee of twenty-seven members that this report suggested more problems than it attempted to solve; that it opened the way for further work, indefinite in length and in time, in this field. It was further definitely recognized when that report was in process of presentation a year and a half ago, that the whole problem of method was practically unsolved as related to the use of materials.

In the meeting in Chicago a year ago last February, a resolution in favor of a program of study, investigation and research in this field, was unanimously adopted by the National Council of Education, by the American Association of Teachers Colleges, by the Executive Committee of the National Education Association, as well as by this Joint Health Committee. May I say further at this time that the studies recommended at the end of this Conference fall directly in line with the anticipated follow-up program in relation to this report.

Plans of the Joint Committee

This Joint Committee therefore is very much interested in, and wishes to foster and promote studies and investigations in this field. It plans and hopes to do this with the cooperation of such institutions as the Institute of Educational Research, the Institute for Curriculum Research in Columbia University, with universities and departments of education qualified to guide and undertake research in any and all parts of the country, and to cooperate in so far as may be desirable and possible with school systems and health workers of various degrees of professional training but with definite interest in doing more intelligent and carefully directed and controlled work in one type of study or another, than has been generally done in the past.

It is considered desirable by this Joint Health Committee that there should be cooperation also in such a broad program of study, by organizations like the American Child Health Association, in giving service, in providing the cooperation which such organizations may feel qualified to give.

As Professor Turner has pointed out, there are different types of studies, of experiments, of investigations and of research. May I call the attention of the members of the Conference, as you look over the studies presented this afternoon, to

Constructive work, investigation and research

the classification of studies under three heads: constructive work, investigation and research? It is important that the studies and investigation in this field of health education shall be so conducted that they will receive reasonable recognition, and command a reasonable respect from those who are making studies in other related fields. Sometimes the experiments and studies which are conducted in fields where special interests and enthusiasm obtain, are not always so set up and carried through, that they command such respect. That may be true of any field; not necessarily more true of this field in which we are so greatly interested.

May I suggest that research today, distinguished somewhat from study and experimentation, requires a composite type of supervision and direction of science with reference to the accuracy of the fundamental facts and materials employed; of psychology in the field of education with reference to the processes of mind, because after all, this problem of health education is fundamentally a problem of mental processes. To be sure, the physical conduct of life, the emotional conditions and states that control the social adjustments and moral values and qualities, are involved, but our educational process is always a process of mind, of consciousness and of mental control.

We need here also in research in health education, the help of the practical but wise educator, so that these general processes may stand the test of actual practice. We need the help of the best that has been developed in the field of educational measurements.

May I say in closing, in behalf of this Joint Health Committee, that this committee will be interested to cooperate with individuals, institutions, health workers, school systems of various types. The studies that are to be made in the field are as valuable as—sometimes, in a way more valuable than—theoretical researches in the university, but each type has its distinctive value.

Then again let me say that our Joint Health Committee feels a deep sense of appreciation and gratitude for the cooperation with the work which it is trying to do, expressed by this Conference in its general program, in its significant results and in the distinct help which it will give to the committee itself.

The next presentation on our program is on the topic "Possible Contributions to the Educational Aspects of the Health Program by Voluntary Associations." This is to be given by Miss Emma Dolfinger.

Miss Dolfinger:

I want to talk to you for these few minutes about the work of volunteer agencies in the field of social service, broadly conceived. This is a matter of importance to us in our country, because here, more than in many countries, it has grown to be something like a policy for experimental undertakings to be initiated by voluntary agencies of one kind or another.

Volunteer agencies

It often happens that a promising idea is sponsored by a volunteer agency, and then in the course of time, when the new plan has been tried out, it is taken over, developed perhaps on a more sound and permanent basis, and eventually is worked into those official agencies which are part of the guiding forces of our society. In every locality there are many of these volunteer agencies, and it is an important problem to know how to use them in the best interests of the community.

May I point out what seems to me the relationship between volunteer agencies and the plan Dr. Wood has just suggested to you, namely, that educational groups all over the country cooperate with each other through the Joint Committee of the American Medical Association and the National Education Association.

This plan is essentially a democratic one. It has a great many of the advantages of a democratic plan of procedure. Without discussing the advantages of the democratic procedure, we must concede that in this country we are historically more or less committed to them, but there are disadvantages also. Those disadvantages we must face and meet in order that only the good effects of the democratic procedure may result. Some of those disadvantages are perhaps an inner weakness in organization, a looseness and incoherence in results. In order to avoid such faults, it is important to look about for the kind of guidance which will safeguard our work.

We ought to be able to look for such direction, to the research departments of our various institutions for adult educa-

tion, to the numerous research groups set up in one way or another. We should be able to expect those trained and qualified people to give with infinite inspired patience of their time and abilities, to search out the truths and the interrelation of truths which we must have as our foundation. It must be our purpose to go to those who are the fountain head of knowledge, to learn from them and get from them that guidance in scholarship which we need.

Types of leadership: the knower, the seer, the doer

In addition to the scholar type of leadership, we also need the "seer" kind of leadership. We need the people who see visions and dream dreams.

And then, in addition, we need still another kind of leader. We need the kind of leader who is the "doer," the kind of person who goes into action and accomplishes results. This person, if he is the right kind of doer is intelligent enough to seek the leadership of the scholar and has imagination enough to appreciate the dreams and the visions of the seer. It is only when the volunteer agency gets the kind of leadership which appreciates and seeks these two kinds of direction, that it will be able to completely justify itself.

Those are the qualifications that we want in our leaders. We do not always find all these gifts in our leaders, because supermen and superwomen are not very many, but at least those are the qualities that we must hopefully look for. Of course, the volunteer or private association does good in proportion to the kind of leadership it is able to acquire. Of first importance is that quality of looking to the person who knows for guidance and of looking to the person who can see for inspiration. We can at least expect that much.

Moreover, it must be remembered by the private organization that it has a larger measure of freedom than the official groups, and because it has that large measure of freedom from imposed obligations, it has a great obligation to the community. There is always the *noblesse oblige* of any kind of privilege. It carries the obligation of vision or at least of receptivity to vision. It carries the obligation of initiative. The volunteer agency should show willingness to fit into the program of the official group and an ability to supplement what that official group can do, with the particular specific kind of gift or service

that the volunteer agency can give. Fulfillment of obligation implies these returns.

The mobile corps of the social-educational machinery

The volunteer agency is what might be called the mobile corps of the social-educational machinery. But in so far as it is free to move about, so it must be wisely guided by far-seeing eyes, that it may go in the right direction.

With such ideas in mind, we may well ask what can we do as volunteer agencies in this new era to further the infiltration of health education into the functions of the various communities with which we are associated. I think there are a number of things that can be done. In the first place, there is what might be called emergency or specialized help. If a volunteer association seeks to give such help, then its workers must be well trained —as well trained at least as the rank and file of the professional workers in the official agency the volunteer group seeks to help. This is, of course, necessary because the volunteer agency must often give the same quality of service though working in a different field and under different auspices, doing the thing which the official worker cannot do because of the limitations within which he works. Emergency help may mean giving assistance or giving guidance or giving the kind of help that an official supervisor would give if he were present. There are communities where such help is not officially provided, and if the volunteer worker is adequately trained to give the needed service, the frequent result is the incorporation of that service into the official educational or other health or social agencies. Of course, the aim of the conscientious volunteer worker is to see his job as initiator completed, and then to step out, giving his help to strengthening and building up the official channel for his project in that community.

Another service of volunteer agencies is the coordination of the work of varying agencies. Today we have many different agencies trying to do many different kinds of things, oftentimes many aspects of the same thing. They work in circles, overlapping. Many times a volunteer agency can bring the work of those various groups into harmony and produce a composite result of value. That service again requires the power of self-elimination. The volunteer agency which cannot understand the needs of the community and eliminate its own interests in the

interest of the common good, is of course, not living up to the obligations of its freedom.

Materials prepared by volunteer agencies

Then there is the service of preparation of materials. We have heard much about this. Again the service of the volunteer agency carries the obligations of its wide freedom. Many times, the most important kind of material is the sort of material for which there is not yet developed a large enough demand to make a commercial publishing company willing to risk producing the things needed at the moment by the community. If the workers do not realize their need on a given piece of material, it isn't, in the commercial sense, a paying thing. The volunteer agency ought to be able to survey a field, find out what is needed, and produce experimentally something sound and attractive which will lead to a commercially profitable demand for such material.

The volunteer's freedom imposes on him the obligation of most meticulous care in the development of material, that it be of the highest degree of soundness, and of the best quality, educationally speaking. Unless its material can fall in line with such standards, the agency producing it is not living up to the obligations of its freedom.

Then also there is the service of acting as clearing house for the activities of other people. This is one of the most important things a volunteer agency can do, because it is free to come and go when emergency arises. It can go where interesting things are being done. It can travel far and wide, and there again its obligations require it to be careful in its observation and generous in the dissemination of what it has learned, to the end of helping people everywhere understand what their fellow-workers have done. Similarly, there is the possibility of bringing together in conferences from many fields, people who are working toward a common goal, for the sake of that fertilizing quality which comes from the contact of one mind with another. These things are of great value.

This Conference which we have just enjoyed here is an illustration of what profit may come through association of people who, working in varied fields, are trying to see different aspects of their problems and who are bringing to the problems the specific gifts growing out of their specific training and their specific

experience. The result is to give new insight, to create a better understanding of the problem, to see it from more angles, above all, to appreciate the need of more knowledge about more things. A conference of this kind, in which we pool our *ignorances* is far more fruitful of results than a conference in which we pool our achievements, because the more we recognize what we do not know, the more certain we are to seek more light, and the surer we are of making careful experiments.

We hope the problems we have here proposed will travel far and wide, and will be suggestive to serious students of help which they can give. In work of this kind, much guidance by the experts in the fields of education and science is required. When we attempt to make investigations or when we attempt to do constructive work, perhaps our first duty is to look for the person who can give such direction.

It has been suggested that we shall want to organize our constructive work along such lines that our results will be comparable. For that reason, those who are on the firing line, as it were, in this matter of health education, are very glad indeed to realize that the Technical Committee of this Joint Committee of the National Education Association and the American Medical Association may be interested in attempting to help correlate such studies as may be made. Other groups will be interested to do the same thing. From the pooled laboratory studies that could and no doubt will be undertaken all over the land, as the years go by, we shall come to learn more of our problems and to meet them more intelligently.

Technical Committee

In concluding, I should like to add one final word of thanks and appreciation to our hosts at the University, and to you who have thought through this Conference with us. I am sure we all go away feeling a genuine thrill in the knowledge that there is so much to do and so many opportunities to do it well.

Chairman:

We have to hear now, the report of our Resolutions Committee, and the chairman, Mr. Oberteuffer, will present that report.

Mr. Oberteuffer:

Resolutions Committee Report

When we come to the end of a Conference like this, it has been customary in the past and I expect it will be customary in the future, to appoint a committee whose function it is to draw up a set of resolutions expressing various ideas. We had one for this Conference and we met, and we have drawn up our resolutions. However, we have not tried to make these resolutions a rhetorical masterpiece. These resolutions are not filled with glowing phraseology, because we believe, and I think we express the opinion of every member of the Conference whose heart is filled with gratitude for what has been done for us and with us, we believe that the members of the Conference are appreciative of the tremendous amount of work that has been done to make this Conference a success.

RESOLUTIONS

THE members of the Fourth Annual Conference on Health Education, conscious of the benefits derived from the sessions, wish to express their sincere thanks to:

The Faculty Committee of the University of Chicago, Miss Gertrude Dudley, Chairman, for the carefully worked out arrangements for the handling of the Conference, and especially for the use of the Ida Noyes Hall.

The General Committee of the City of Chicago, Miss Mary E. Murphy, Chairman, for the hospitality and cordial reception accorded the Conference members.

The members of the regular University Faculty and Staff, Dean Tufts, Dean Gray, Dr. Bobbitt, Dr. Carlson, Dr. Ivy, Dr. Stewart, Miss Colburn, Dr. Blunt, Miss Roberts, Dr. Monilaw, Mr. H. J. Smith and Mr. Tracht, who have individually enriched the program.

Dr. Thomas D. Wood for his invaluable service as Chairman of the Sessions.

Mr. A. S. Barr, Miss Mary E. Murphy, President W. B. Owen, Mr. John Shepherd, Dr. John McCarthy, Chairmen, for their leadership in the daily sessions, and Miss Dolfinger, Miss Whitney, Miss Perrin and Miss Oppen for their assistance as secretaries.

Miss Emma Dolfinger and the staff associates from the American Child Health Association for the indispensable part they played in the Conference.

The Elizabeth McCormick Memorial Fund Institute for the display of health education materials, and Mrs. Taylor, librarian, for her gracious cooperation.

The Joint Committee on Health Problems for the privilege of using their material.

The members of the Summarizing Committees for their valuable work in the crystallization of the findings of the sessions.

Submitted by the Resolutions Committee:

Mr. D. Oberteuffer, *Chairman*
Mrs. Ora Hart Avery
Miss M. Elizabeth Barker
Mr. E. V. Sayers
Miss Emeline S. Whitcomb

SPECIAL MEETING ON HEALTH EDUCATION MEASUREMENTS

A GROUP of people especially interested in measuring the results of health education met with Professor C. E. Turner to discuss this subject. Their report, submitted to the Conference through Professor Turner, was as follows:

Measuring The Results of Health Education

Introduction

We recognize that the accomplishments of health education cannot be measured with the precision of experimentation in the exact sciences. The contribution of health education to the adult life of the individual cannot be measured readily. But the progress of the movement demands that in so far as possible we measure the immediate results in terms of habits, knowledge and health improvement.

Measure in terms of habits, knowledge and health improvement

Habits

One method of determining habit is to observe a group or groups of children to see whether they react in a positive or negative way to a particular and simple situation. An example of this might be the observation of the number of children who without suggestion wash their hands before lunch, opportunity for so doing being provided.

It is obvious that repetition of these checks should be under similar conditions and without suggestion or warning.

It is possible to check improvements in habits by successive inspections to observe a definite condition, for example, the number of children with nails unbitten or the number of children who meet a definite standard of cleanliness.

The pupil questionnaire may be used as a method for recording the habits for the preceding day. The child should understand that his activities for the preceding twenty-four

hours are to be reported rather than his customary habits. The teacher will emphasize that this is a record for the whole class and that the pupil may sign his name or not as he chooses. The questionnaire should be clear and specific and within the power of the child to answer. It is understood that this is a meaure of condition rather than a means of stimulating individual improvement. Care should be taken that the children are not given advance information in regard to the test.

Parent questionnaires are also inaccurate measurement of habits but are of some value as a measurement and as a means of parent education. The precision of questionnaires used to date is not great enough to compare one community with another. The questionnaires should be clear and specific and require a "yes" or "no" answer or a check. Care should be taken to avoid words that are not universally understood. Questions dealing with such words as "cereals" or "vegetables" should include lists of these. These tests may be made before and after a training period. Such tests should not be used to indicate permanent habit formation if made during or immediately after a drive.

Knowledge

The further development, standardization and use of the health knowledge tests is desirable.

The Use of Growth As a Measure of Health Improvement

Growth as a measure

There is sufficient seasonal fluctuation in the growth rate to make unscientific the comparison of the number of underweight children at different times of the year. Data used to reflect health conditions through growth records should be collected only by adequately trained people. This group deplores claim for the reduction of underweight or malnourishment based upon growth studies the precision of which is not sufficiently great to make the findings of reliable and of scientific value. This warning should not limit the use of growth records as an educational device.

Suggestions for Research

Further studies in different parts of the country and under controlled laboratory conditions to determine the extent and causes of seasonal fluctuation in growth.

Studies to determine the continuity or intermittency in the growth of normal children.

Special studies suggested

Studies to determine whether an improvement in nutrition and daily regimen resulting in an increase in the rate of gain in weight is accompanied by an increase in the rate of growth in height.

Research to determine the usefulness of other simple health indices.

Studies to determine the relationship between improvement in health and mental attainment.

Further studies in the frequency of common colds and other respiratory infections as related to habits of living.

The determination of the extent if any to which the health education program has an effect on the number of physical defects corrected.

This group requests the American Child Health Association to act as a clearing house for us and assist us by distributing among us plans or devices for measuring results contributed by members of the group. Others may be added to this group. It is desired that the Association further assist individuals by maintaining information as to the people or institutions engaged in different types of research.

GUESTS OF THE CONFERENCE

A

Dr. J. Mace Andress	*Lecturer on Health Education, Boston University and Boston School of Physical Education, 675 Boylston Street, Boston, Massachusetts.*
Miss Willie Dean Andrews	*Director of Physical Education, Athens Child Health Demonstration, Athens, Georgia.*
Dr. Ada Hart Arlitt	*School of Education, University of Cincinnati, Cincinnati, Ohio.*
Miss Mary Noel Arrowsmith	*Executive Secretary, National Safety Council, 120 West 42nd Street, New York City.*
Miss Pearl D. Aszmus	*Teacher in Home Economics, Lincoln Junior High School, Kenosha, Wisconsin.*
Mrs. Catherine R. Athey	*Executive Secretary, Idaho Anti-Tuberculosis Association, 320 Boisé National Bank Building, Boisé, Idaho.*
Mrs. Ora Hart Avery	*State Supervisor of Home Economics, State Board of Education, Richmond, Virginia.*

B

Miss Myrtle L. Barger	*Health Educator, Philadelphia Interstate Dairy Council, 1211 Arch Street, Philadelphia, Pennsylvania.*
Miss M. Elizabeth Barker	*Assistant Director, Health Education Department, Tulsa Public Schools, Tulsa, Oklahoma.*
Mr. A. S. Barr	*Associate Professor of Education, University of Wisconsin, Madison, Wisconsin.*
Miss Christine Bednar	*Principal, Parker Practice School, 6800 Stewart Avenue, Chicago, Illinois.*
Miss Juliet Bell	*Director, County Health Education Demonstration, Western State Normal School, Kalamazoo, Michigan.*
Dr. Margaret Bell	*Physician to Health Service and Professor of Physical Education, University of Michigan, Ann Harbor, Michigan.*
Dr. Christine Bergolth	*4940 Indiana Avenue, Chicago, Illinois.*
Miss Carol L. Besteland	*Nurse, Eastern Illinois State Teachers College, Charleston, Illinois.*
Mr. J. E. Bjorlie	*High School Inspector, Bismarck, North Dakota.*
Miss Mary P. Blount	*Instructor, Physiology and Embryology, Chicago Normal College, Chicago, Illinois.*
Dr. Katharine Blunt	*Chairman, Home Economics Department, University of Chicago, Chicago, Illinois.*
Dr. Franklin C. Bobbitt	*Professor of School Administration, University of Chicago, Chicago, Illinois.*

Miss Marjorie Bouvé	*Director, The Bouvé School, 725 Boylston Street, Boston, Massachusetts.*
Miss Alice Brandl	*Principal, Junior High School, Salzburg, Austria.*
Mr. D. E. Breed	*Executive Secretary, Texas Public Health Association, 616 Littlefield Building, Austin, Texas.*
Mr. W. A. Buice	*Professor of Public Health and Health Education, Baylor University, Waco, Texas.*
Miss Margaret Burns	*Assistant Professor of Physical Education, University of Chicago, Chicago, Illinois.*
Miss Nellie E. Busell	*Head, Physical Education Department, Chicago Normal College, Chicago, Illinois.*
Miss Margaret Butler	*Superintendent of Nurses, Chicago Health Department, Chicago, Illinois.*

C

Miss Gladys Cameron	*Instructor in Bacteriology, University of Otago, Dunedin, New Zealand.*
Miss Helen O. Carlson	*Director of Physical Education, Central High School, Tulsa, Oklahoma.*
Dr. A. J. Carlson	*Professor of Physiology, University of Chicago, Chicago, Illinois.*
Dr. R. L. Carlton	*Department of Health, Winston-Salem, North Carolina.*
Miss Erle Chambers	*Executive Secretary, Arkansas Tuberculosis Association, 540 Donaghey Building, Little Rock, Arkansas.*
Miss Margaret S. Chaney	*Graduate Student, University of Chicago, Chicago, Illinois.*
Dt. Taliaferro Clark	*Senior Surgeon, U. S. Public Health Service, Washington, D.C.*
Miss Bertha C. Clement	*Supervisor, Anti-Tuberculosis Association of Jefferson County, 2019 Avenue F, Birmingham, Alabama.*
Dr. Marion O. Cole	*Medical Advisor for Women, University of Chicago, Chicago, Illinois.*
Miss Georgie B. Collins	*Special Health Teacher, Superintendent of Schools Office, Malden, Massachusetts.*
Miss Marguerite G. Collins	*Director, Modern Health Crusade, Louisville Tuberculosis Association, 215 East Walnut Street, Louisville, Kentucky.*
Miss Frances A. Cook	*Director, Health Crusade, Chicago Tuberculosis Institute, 360 North Michigan Avenue, Chicago, Illinois.*
Miss Hazel Cooke	*Health Supervisor, Junior High School, Pine Bluff, Arkansas.*
Mrs. Agnes Dodge Corbin	*Instructor, Physical Education, 1425 Grand Avenue, Kalamazoo, Michigan.*
Miss Lucy Cordiner	*Superintendent, Ridge Farm Preventorium for Children, Deerfield, Illinois.*
Miss Edith S. Countryman, R.N.	*Director Health Education, Iowa Tuberculosis Association, 518 Frankel Building, Des Moines, Iowa.*

Miss Ruth Mary Cowan — *Assistant Professor of Home Economics, Michigan State College, East Lansing, Michigan.*

Miss Nell Cramer — *Supervisor of Social Service Department, Board of Education, Grant Building, 17th and Pine Streets, Philadelphia, Pennsylvania.*

Mr. H. R. Crook — *Supervisor, Physical Education, Chicago Public Schools, 460 South State Street, Chicago, Illinois.*

Miss Alta Bee Crossland — *Director of Home Economics, Evanston Public Schools, Evanston, Illinois.*

Miss Marguerite I. Cutland — *Home Economics Instructor, 839 North Dearborn Street, Chicago, Illinois.*

D

Miss Carol M. Davis — *Teacher of Home Economics, Highland Park High School, Highland Park, Michigan.*

Miss Ruth L. Dennhardt — *Assistant to Dr. Snow, Michigan State Normal College, Ypsilanti, Michigan.*

Dr. John M. Dodson — *Executive Secretary, Bureau of Health and Public Instruction, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.*

Miss Emma Dolfinger — *Director, Division of Health Education, American Child Health Association, New York City.*

Miss Gertrude Dudley — *Director of Physical Education for Women, University of Chicago, Chicago, Illinois.*

E

Miss Marietta Eichelberger — *Student, University of Chicago, Home Economics Department, Chicago, Illinois.*

Miss Carmel B. Elliott — *Director of School Nurses, Columbus Public Schools, East State Street, Columbus, Ohio.*

F

Miss Ada M. Field — *Associate Professor, Department of Home Economics, George Peabody College, Nashville, Tennessee.*

Miss Louise Fitzgerald — *Nutrition Director, National Dairy Council, 910 South Michigan Avenue, Chicago, Illinois.*

Mrs. DeWitt Foster — *Chairman, Public Health, Woodlawn Study Club, 1653 East 67th Street, Chicago, Illinois.*

Miss Helen D. Freeborn — *Supervising Teacher, Health Education, 34 Rochester Savings Bank Building, Rochester, New York.*

G

Miss Vera Gardiner — *Supervisor of Physical Education, 460 South State Street, Chicago, Illinois.*

Miss Grace George	*Assistant Professor of Hygiene, Central Missouri State Teachers College, Warrensburg, Missouri.*
Mrs. H. C. Gibson	*Field Secretary, Arkansas Tuberculosis Association, 540 Donaghey Building, Little Rock, Arkansas.*
Miss Imogene Goar	*Nutrition Teacher, Anti-Tuberculosis Association, 2019 Avenue F., South, Birmingham, Alabama.*
Miss Gladys Gogle	*Physical Director, Oak Park High School, 303 North Oak Park Avenue, Oak Park, Illinois.*
Mrs. Ernest R. Grant	*Chairman, Advisory Committee of Tuberculosis Secretaries on Child Health Education of the National Tuberculosis Association. Roosevelt Hotel, Washington, D.C.*
Dean William S. Gray	*Dean of School of Education, University of Chicago, Chicago, Illinois.*
Dr. Clifford G. Grulee	*Associate Professor of Pediatrics, Rush Medical College, and Chief of Pediatric Staff, Presbyterian Hospital, Chicago, Illinois.*

H

Miss Theresa Haaga	*Maury School, Memphis, Tennessee.*
Miss Mary L. Hahn	*Assistant Supervisor, Elementary Health Education, Board of Education, Rockwell Street, Cleveland, Ohio.*
Miss Florence L. Hall	*Associate Specialist in Milk Utiltization, Bureau of Dairying, U. S. Department of Agriculture, Washington, D. C.*
Miss Helen Chandler Hamilton	*Health Education Department, Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago, Illinois.*
Miss Cara L. Harris	*Director of Health Education, Rutherford County Child Health Demonstration, Murfreesboro, Tennessee.*
Miss Gertrude Henderson	*Publication Secretary, American Social Hygiene Association, 370 Seventh Avenue, New York City.*
Miss Mary M. Herlitz	*Teacher, Public Schools, 28 Warren Street, Hammond, Indiana.*
Mrs. Florence M. Hobson	*Training Teacher, Hygiene, Fairmont Junior High School, Cleveland, Ohio.*
Miss Anita M. Henkel	*Health Education Director, Tuberculosis Society of Oklahoma City, 401 Elks Building, Oklahoma City, Oklahoma.*
Dr. Johanna Heumann	*1368 East 53rd Street, Chicago, Illinois.*
Miss Minnie S. Higgs	*Public Health Nurse, Health Department, Chicago, Illinois.*
Miss Carolyn Hoefer	*Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago, Illinois.*
Dr. Abby Virginia Holmes	*Head, Department of Health Education, State Normal School, Slippery Rock, Pennsylvania.*

Miss Jessie M. Hoover — *Specialist in Milk Utilization, Bureau of Dairying, U. S. Department of Agriculture, Washington, D. C.*

Miss Gertrude F. Hosmer — *Supervisor, Public Health Nursing, Peking Union Medical College, Peking, China.*

Miss Cora Belle Hunter — *Director, Health Education, Young Women's Christian Association, 116 West 5th Street, Tulsa, Oklahoma.*

I

Miss Florence Imlay — *Director, University Cooperative Pre-School Nursery, University of Chicago, Chicago, Illinois.*

J

Dr. Clare Jacobson — *Municipal Tuberculosis Dispensary, 1000 East 75th Street, Chicago, Illinois.*

Miss Kathryn L. Jensen — *Director Health Education, Seventh Day Adventist Demonstration, General Conference Building, Washington, D.C.*

K

Miss Edna Keith — *Elementary Supervisor, 1211 Cass Street, Joliet, Illinois.*

Mrs. Thelma Z. Kyser — *Instructor, Hygiene and Physical Education, State Normal College, Natchitoches, Louisiana.*

L

Dr. A. J. Lanza — *Executive Officer, National Health Council, 370 Seventh Avenue, New York City.*

Miss Ruth Lehman — *Instructor, Home Economics, College of Education, University of Chicago, Chicago, Illinois.*

Miss Marion O. Lerrigo — *Research Assistant in Health Education, Teachers College, Columbia University, New York City.*

Miss Genevieve Lill — *Supervisor of Health, Wichita Public Schools, Wichita, Kansas.*

Miss Clara H. Lobben — *Second Grade Teacher, Fargo, North Dakota.*

Miss Katie M. Lobben — *Primary Grade Teacher, Fargo, North Dakota.*

Mr. Harvey L. Long — *Director of Health and Physical Education, Public Schools, Lincoln, Nebraska.*

Mc

Miss Florence McAfee — *Physical Education Instructor, Eastern Illinois State Teachers College, Charleston, Illinois.*

Dr. John D. McCarthy — *Instructor in Health Education, New York University, New York City, and Specialist in Behavior Problems of Children, New York City High Schools.*

Miss Sarah McGiffert — *Supervisor of Health Education, Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago, Illinois.*

M

Miss Frances T. Martin	*Nutrition Teacher, Public Schools, Columbus, Ohio.*
Miss Sadie Martin	*City Health Department, Winston-Salem, North Carolina.*
Mr. August Maue	*County Superintendent of Schools, Court House, Joliet, Illinois.*
Mr. F. N. Mead	*Head, Physical Education Department, Iowa State Teachers College, Cedar Falls, Iowa.*
Miss Lois Hayden Meek	*Educational Secretary, American Association of University Women, 1634 Eye Street, N.W., Washington, D.C.*
Miss Ava B. Milam	*Dean Home Economics, Oregon State Agricultural College, Corvallis, Oregon.*
Miss Charlotte H. Miller	*Extension Department Pittsburgh District Dairy Council, 451 Century Building, Pittsburgh, Pennsylvania.*
Miss L. M. Mitchell	*Staff Assistant, American National Red Cross, 1709 Washington Avenue, St. Louis, Missouri.*
Dr. Fred Moore	*Director, Health Department, Public Schools, Des Moines, Iowa.*
Miss Mary E. Murphy	*Director, Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago, Illinois.*

N

Mrs. L. M. Neblett	*Secretary, Shelby County Tuberculosis Society, Memphis, Tennessee.*
Miss Pansy Nichols	*Children's Secretary, Texas Public Health Association, 616 Littlefield Building, Austin, Texas.*
Miss J. Anna Norris	*Director, Department of Physical Education for Women, University of Minnesota, Minneapolis, Minnesota.*

O

Mr. D. Oberteuffer	*Instructor, Health Education, University of Oregon, Corvallis, Oregon.*
Miss Mary P. O'Donnell	*Instructor in Physical Education, Skidmore College, Saratoga Springs, New York.*
Mrs. Jane Ogle	*Field Secretary, National Physical Education Service of Playground and Recreation Association of America, New York City.*
Miss Agnes M. Olson	*Educational Director, Evaporated Milk Association, 978—231 South La Salle Street, Chicago, Illinois.*
Miss Lucy Oppen	*Staff Associate, Division of Health Education, American Child Health Association, New York City.*
Dr. William B. Owen	*President, Chicago Normal College, Chicago, Illinois.*

P

Miss Bertha M. Parker	*Teacher, Laboratory Schools, School of Education, University of Chicago, Chicago, Illinois.*
Miss Helen T. Parsons	*Assistant Professor in Home Economics, University of Wisconsin, Madison, Wisconsin.*
Miss Sara Jane Patton	*Graduate Student, University of Chicago, Chicago, Illinois.*
Mrs. Lucy M. Paul	*Formerly Instructor of Hygiene, Bacteriology and Physiology in Teacher Training, Pratt Institute, Brooklyn, New York.*
Miss Ethel Perrin	*Staff Associate, Division of Health Education, American Child Health Association, New York City.*
Miss Agnes B. Peterson	*Worker in Health Education, Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago, Illinois.*
Miss Marie Crowe Peterson, R.N.	*Health Education Director, Minnesota Public Health Association, 717 Commerce Building, St. Paul, Minnesota.*
Miss Anette M. Phelan	*Teacher of Health Education, State Normal School, Athens, Georgia.*
Mrs. Sara W. Prentiss	*Instructor in Household Administration and Household Science, Oregon State Agricultural College, Corvallis, Oregon.*
Mrs. Josephine Corliss Preston	*Superintendent, Public Instruction, State Capitol, Olympia, Washington.*
Miss Katharine A. Pritchett	*Consultant, Administrative Nutrition, State Department of Welfare, Harrisburg, Pennsylvania.*
Miss Erna Proctor	*Director of Health Education, Athens Child Health Demonstration, Athens, Georgia.*

R

Miss Bessie B. Randle	*Supervisor of School Nursing and Health Education, Cattaraugus County Health Demonstration, Exchange National Bank Building, Olean, New York.*
Miss Nora L. Reynolds	*Field Secretary, Child Health Education Service of the National Tuberculosis Association, 370 Seventh Avenue, New York City.*
Miss Lydia J. Roberts	*Assistant Professor of Home Economics, University of Chicago, Chicago, Illinois.*
Miss Ethel Rockwell	*Supervisor of Physical Education, Kalamazoo Public Schools, Kalamazoo, Michigan.*
Dr. J. F. Rogers	*Chief, Division of Physical Education and Hygiene, Bureau of Education, Department of the Interior, Washington, D.C.*
Miss Elma Rood	*Director, Health Education, Mansfield Child Health Demonstration, Mansfield, Ohio.*

Mr. Evart G. Routzahn	*Associate Director, Department of Surveys and Exhibits, Russell Sage Foundation, 130 East 22nd Street, New York City.*
Mrs. Alma C. Ruhmschussel	*Supervisor, Physical and Health Education, Public Schools, Dayton, Ohio.*

S

Miss Margaret Sawyer	*Director, Educational Department, Postum Cereal Company, New York City.*
Mr. E. V. Sayers	*Director of Education, Territorial Normal School, Honolulu, Hawaii.*
Miss Evelyn C. Schmidt	*Director, Department of Dental Health, American Dental Association, 58 East Washington Street, Chicago, Illinois.*
Mr. Moritz Schmidt	*Physical Director, Elementary Schools, Chicago, Illinois.*
Dr. Ada E. Schweitzer	*Director, Child Hygiene, Indiana State Board of Health, 330 State House, Indianapolis, Indiana.*
Mr. Harry A. Scott	*Director, Physical Education for Men, University of Oregon, Eugene, Oregon.*
Mrs. Norma Selbert	*Assistant Professor, Department of Public Health, College of Medicine, Ohio State University, Columbus, Ohio.*
Mrs. Myrtle Stump Shaffer	*5529 Drexel Avenue, Chicago, Illinois.*
Dr. William B. Sharp	*Professor of Bacteriology and Preventive Medicine, University of Texas, Galveston, Texas.*
Mr. John W. Shepherd	*Assistant Principal and Head of Department of Science, Chicago Normal College, Chicago, Illinois.*
Miss Rebecca Sholley	*3836 Thomas Avenue, South, Minneapolis, Minnesota.*
Miss Beatrice Short	*Secretary for School Nursing, National Organization for Public Health Nursing and American Child Health Association, New York City.*
Mrs. Marion Simmonson	*Director, Health Education, New Trier High School, Kenilworth, Illinois.*
Miss Marjorie O'Byrne Smith	*Director, Child Health Education, Indiana Tuberculosis Association, 1220 Meyer Kiser Building, Indianapolis, Indiana.*
Dr. Glenadine Snow	*Health Director, Michigan State Normal College, Ypsilanti, Michigan.*
Miss Mary E. Spencer	*Health Education Specialist, National Catholic Welfare Conference, 1312 Massachusetts Avenue, Washington, D.C.*
Miss Mary E. Stephenson	*Assistant Supervisor of Health Education, Board of Education, St. Louis, Missouri.*
Miss Louise Strachan	*Director, Child Health Education Service, National Tuberculosis Association, 370 Seventh Avenue, New York City.*
Miss Mary E. Sutherland	*Educational Secretary, Pulaski County Tuberculosis Association, Little Rock, Arkansas.*

Miss Belva L. Swalwell — *Assistant Professor, Hygiene and Sanitation, Iowa State Teachers College, Cedar Falls, Iowa.*

Miss Mary E. Sweeney — *Nutritionist, Merrill-Palmer School, Detroit, Michigan.*

T

Miss Amy Pryor Tapping — *Staff Associate, American Child Health Association, New York City.*

Miss Mary F. Taylor — *Instructor, Health and Physical Education, New Paltz State Normal School, New Paltz, New York.*

Mrs. Mary W. Taylor — *Librarian, Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago, Illinois.*

Miss Adelbert A. Thomas — *Director, Health Education, State Board of Health, 532 West Main Street, Louisville, Kentucky.*

Miss Jennie Tilt — *Research Professor of Nutrition, Florida State College, Tallahassee, Florida.*

Dr. G. Loutrell Timanus — *Supervisor of Health Service, Playground Athletic League, 7 East Mulberry Street, Baltimore, Maryland.*

Miss Mildred Tolhurst — *Teacher, Physical Education Department, University of Chicago, Chicago, Illinois.*

Miss Anna B. Towse — *Staff Associate, American Child Health Association, New York City.*

Miss Mabel B. Trilling — *Home Economics Department, University of Chicago, Chicago, Illinois.*

Professor C. E. Turner — *Associate Professor of Biology and Public Health, Massachusetts Institute of Technology, Cambridge, Massachusetts.*

Miss Dolly Twitchell — *Nurse and Instructor in Hygiene, Beloit College, 743 College Street, Beloit, Wisconsin.*

V

Mr. E. F. Van Buskirk — *Executive Secretary, Cincinnati Social Hygiene Society, 25 East 9th Street, Cincinnati, Ohio.*

Miss Sarah Vanderlinden — *5455 Greenwood Avenue, Chicago, Illinois (Student at University).*

Miss Winifred Ver Nooy — *Reference Librarian, University of Chicago, Chicago, Illinois.*

Dr. Stella B. Vincent — *Teacher of Psychology, Chicago Normal College, Chicago, Illinois.*

W

Miss Helen I. Walker — *Teacher, Open Window Class, 271 Summer Street, Paterson, New Jersey.*

Dr. W. F. Walker — *Research Associate, American Child Health Association, New York City.*

Miss Edith G. Wallis — *Instructor in Foods, Lincoln Junior High School, Kenosha, Wisconsin.*

Miss Emeline S. Whitcomb	*Specialist in Home Economics, United States Bureau of Education, Washington, D.C.*
Miss Anne L. Whitney	*Staff Associate, Division of Health Education, American Child Health Association, New York City.*
Miss Pauline B. Williamson	*Head, School Health Bureau, Welfare Division, Metropolitan Life Insurance Company, New York City.*
Mr. N. Guy Wilson	*Advertising Manager, Primary Education and Popular Educator, 2457 Prairie Avenue, Chicago, Illinois.*
Dr. Emma A. Winslow	*Secretary, Child Health Demonstration Committee, 370 Seventh Avenue, New York City.*
Miss Grace M. Wilson	*Nutrition Work, Grade School, Winona, Minnesota.*
Dr. Thomas D. Wood	*Professor of Physical Education and Advisor in Health Education, Teachers College, Columbia University, New York City.*
Miss Lorraine Elizabeth Wooster	*715 Harrison Street, Topeka, Kansas.*
Miss Mary May Wyman	*Head, Science Department, Louisville Normal School, Louisville, Kentucky.*

Z

Miss Laura Zirbes	*Lecturer in Elementary Education and Investigator in Reading, Teachers College, Columbia University, New York City.*

INDEX

INDEX

Activities: as objectives of education, 6–11; coordination with school, 65; extra curricular, 7; for children, by student teachers, 205; school clubs, 64

Andress, Dr. J. Mace, 25, 37, 54, 83, 118, 178, 293, 297–300

Arrowsmith, Mary Noel, 312–313

Athletic associations health possibilities of, 95

Avery, Mrs. Ora Hart, 285–287

Barger, Myrtle L., 96

Barker, M. Elizabeth, 23, 97, 155, 187

Barr, A. S., 15

Bell, Juliet, 92, 139

Blue Ribbon project, 160–161

Blunt, Dr. Katharine, 108, 145

Bobbitt, Dr. F. C., 5–13

Bouvé, Marjorie, 38, 114

Brandl, Alice, 36

Busell, Nellie E., 137

Carlson, Helen O., 38

Chicago, University of, health work at, 1

Child, the: as center of program, 151–152; personal aims of, 244

Child care, courses in, 144–145, 154

Clark, Dr. Taliaferro, 130, 210

Collins, Georgie B., 184

Conference: guiding principles, 4–13; historical background of, 2; next steps desired by, 326–329; objectives, 13

Cooperation: among health agencies, 273–276

Correlation: implicit in textbooks, 219; instead of course of study, 54–55

Cowan, Ruth M., 111

Davis, Carol, 60

Defects, physical: dental, and school rating, 132; dental, in preschool child, 129; 130; mental effects of, 25; of vision, 133; recognition of by teacher, 106; retarding influence, 132

Dolfinger, Emma, 3, 118, 248–250, 333–337

Education: purpose of, 5, 6, 244; reorganization of, 5

Elementary school teacher, health service program, 120

Emotional and social health, 32, 49, 64–66, 84, 201; materials for, 292–294; *see also* "Mental hygiene"

Environment, school: factors of, 212; importance of, 100, 105, 153; in harmony with teaching, 246; survey of in Washtenaw County, Mich., 228–229

Examinations, physical, 16–28, 31, 34; education of community through, 160–161; of teachers, 82, 84–87, 98, 163; periodic, 18, 21, 26, 33; preschool, 19

Experimental centers: East Orange, N.J., 180–183; Joliet, Ill., 300–305; Malden, Mass., 169–170; 184–185, Mansfield, O., 170–173, 205–206

Fatigue, of rural children, 234–236

Field, Ada M., 111, 283–285

Freeborn, Helen D., 267–269

George, Grace, 35, 145, 232

Grant, Mrs. Ernest R., 97

Gray, Dean William S., 305–311

Growth: as measure of health improvement, 341; continuity of, 11, 129–132; goals, 202; in health, 71; records, at Malden, 184

Habit formation: frequency of practice, 191, 192; psychological principles, 193, 206; at different age levels, 202

Harris, Cara L., 30, 212–215, 257

Haskins, Ida M., paper by, 224–231

Health education: cooperative demonstration in, 93; course in, necessary for diploma, 96–98; course in, prepared by teachers themselves, 185, 209; course in, seasonally arranged, 166–168; course in, graduate, 169; courses in, organization of, 126–128, 139–140, 143, 155–156, 164, 180–183; founded on children's activities, 170–173; growth of, 324–329; objectives, 7; special instruction in, 21, 22; sub-

ject-matter, 101–148, organization of, 119–148

Health: attitudes, 196; goals, 201–202; habits, survey of, 227; knowledge for children, 194, 195; knowledge, minimum essentials for teacher, 118–119; knowledge tests, 101–104, 260; program, departments contributing to, 40–47; program coordination of, 53–56, 146–148; service, definition of, 18; service, teacher's part, 120

Henderson, Gertrude, 39, 65, 141–142, 263

Hobson, Mrs. Florence M., 52

Hoefer, Carolyn, 300–305

Holmes, Dr. Abby Virginia, 82, 86, 96

Home economics: American Association of, 108, 109; for boys, 37, 38; secondary schools, 42, 43, 60–64; varied duties of teachers of, 286–287

Housing for normal students, 94

Inspection: daily, 27, 158; preschool, 19

Joint Health Committee of N.E.A. and A.M.A., 3, 6, 270, 330–332

Keith, Edna, 258

Lanza, Dr. A. J., 273–276

Lerrigo, Marion O., 101, 197, 251

Lill, Genevieve, 234

Lunches, school: a reformation in, 166; educationally used, 260–262; in rural school, 221, 222

McCarthy, Dr. John D., 26, 56, 150–155, 292

Materials for health education: commercially prepared, 247, 282; criteria for evaluating, 251–257; developed in classrooms analysis of, 197–200; laboratory equipment as, 259; mental hygiene, 293–294, 298–300; movies as, 259, 260; preparation of, 307–311; printed for children, 255–256, 296–297; printed, sources of, for teacher, 265–266, 270–271, 276–279; printed, reliability of, 281–282; recommendations from section on, 321–323; relation of, to life of child, 67, 256; rural schools, 287–292; safety education, 312–313; school lunch as, 260–262; secondary schools, 257, 260, 266–268 selecting, principles for, 246–247, 304–305; selecting, discrimination in, 281–283, 295–297; social relations as, 263; types of, sought by teacher, 279–280; teacher-training, useful in, 269–294; visual use, 258

Maue, August, 17, 175, 176

Measurements: training teacher in taking, 272; special meeting on, 340–342

Medical: service in schools, range of, 15; physical examinations, *see* "Examinations, physical"; profession, cooperation of, 177, 180

Mental hygiene, 154; in secondary schools, 28, 29, 32; in teachers colleges, 116–118; *see also* "Emotional and social health"

Methods: analysis of, from classroom work, 197–200; in teacher training for health education, 190–209

Milam, Ava B., 112

Monilaw, Dr., paper by, 19

Moore, Dr. Fred, 22, 34, 57, 59, 177–178

National Health Council, 273–276

Normal health, standards of, 71, 298

Normal motor ability, 137

Norris, Dr. J. Anna, 86

Nursery Schools, 2, 42, 63, 126–130, 144–145

Nutrition: instruction in, for children, 159, 166–167; instruction, results from, 60–61; instruction in, for teachers, 88–92, 109–112

Oberteuffer, Delbert, 33, 55, 67, 338

Observation schools, influence on student teacher, 217

O'Donnell, Mary P., 95, 136

Oppen, Lucy, 97, 180

Owen, Dr. William B., 122

Parents, responsibility of, 9, 17

Parenthood, preparation for, 34, 35, 153, 165; *see also* "Child Care"

Paul, Mrs. Lucy M., 112, 204, 259

Perrin, Ethel, 14

Phelan, Anette M., 84, 176, 200, 233

Physical education: contribution of, to health program, 43–47, 136; in form of play, 138, 139; minimum essentials for student teacher, 114; at Skidmore College, 136–138; at Chicago Normal College, 138

Precept and practice, 44, 53, 61, 91, 113, 217, 245, 260–262

Pritchett, Katharine A., 40, 52, 88, 114

Proctor, Erna E., 98, 165

Questionnaires, use of, 26; on health courses, 109; for children, 341

Reading: too much required of student teacher? 204; value of to children, 306–308
Research, teacher's part, 70
Resolutions committee, report of, 338–339
Responsibility of community, for medical service, 16–18
Reynolds, Nora L., 126
Roberts, Lydia J., 109, 295–297
Rockwell, Ethel, 45, 48, 64
Rogers, Dr. J. F., 104
Rood, Elma, 156, 164, 205–206, 215–223, 287–292
Routzahn, Evart G., 276–279
Rural schools: responsibilities of teacher, 120; material for teacher, 156–161, 171; "seasonal" course for, 166–168; environment, 212–213; public health problems, 213–215, 220; community education, 218; school lunch in, 221–222; surveys in Washtenaw County, Mich., 224–231; clinics, 233
Rural health conditions, 210
Recreation for teachers, 163

Safety education, 39, 312–313
Scapula types, 25
Schweitzer, Dr. Ada E., 34
Schmidt, Evelyn C., 314
Science courses: minimum essentials for student teacher, 112; essential subject-matter in biology, 136
Scott, Dr. Harry A., 26, 44, 46
Secondary schools, health program in, 14–72; summary of, 72–79; problems needing further study, 78–79; examples of, 19–28, 48–50; materials for, 67, 257, 260, 266–268
Secondary education: purpose of, 5; reorganization of, 5
Self-direction, 10, 13
Selbert, Mrs. Norma, 85, 96, 144
Sex hygiene, 32, 141–142
Shepherd, John W., 82, 101, 147
Short, Beatrice, 37, 53
Simmonson, Mrs. Marion, 52
Sleep project, 303–304
Smith, Marjorie O., 232
Snow, Dr. Glenadine, 36, 53, 223
Spencer, Mary E., 162
Student Councils, 50, 65, 95
Student load: outside work, effect of, 94, 99; in relation to nutrition, 91
Survey of 86 Cities, 15
Swalwell, Belva L., 37, 38, 264
Sweeney, Mary E., 128, 130

Taylor, Mrs. Mary W., 315
Teacher: as supervisor and director, 12; example of, 12, 13, 216; health of, 12, 13, 82; too much required of? 175
Teacher-training for health education: based on service program, 122–125; four main factors in, 269; foundations for, 104; minimum essentials—physical education, 114; nutrition, 109–112; science courses, 112; psychology, 203–204, 218; parochial schools, 162–163; recommendations from section on, 238–241; tested by results, 215–216
Thomas, Adelbert A., 279–280
Teeth, care of, 159; educational material, 314
Timanus, Dr. G. Loutrell, 24, 45, 174
Tufts, Dean James H., 1
Turner, Professor C. E., 134, 169, 260, 269–273, 324–329

U. S. Public Health Service: functions of, 210; rural problems, 210–211

Van Buskirk, E. F., 54, 65, 136
Vincent, Dr. Stella B., 116
Volunteer agencies: work of, 333–336; guidance for, 334

Walker, Dr. W. F., 15, 17
Welcome, addresses of, 1
Whitcomb, Emeline S., 37, 41, 260–262
Winslow, Dr. Emma A., 33, 69
Women's clubs, contribution of, 87
Wood, Dr. Thomas D., 1, 2, 18, 51, 71, 120, 146–147, 242–248, 281–283, 330–333
Wooster, Lorraine E., 97
Wyman, Mary M., 143

Zirbes, Laura, 190–197, 203, 254–257

PRINTED IN THE U.S.A.

LANE MEDICAL LIBRARY

This book should be returned on or before the date last stamped below.

APR 28 1976

I420 Health education
H43 conference, Chicago.
1925 Report. 8385
NAME